

MISSOURI DEPARTMENT OF NATURAL RESOURCES
LAND RECLAMATION COMMISSION

In the Matter of:

MAGRUDER LIMESTONE CO.,)	
INC., Osage Beach)	
Quarry, Miller County,)	
Missouri,)	
Applicant.)	Proceeding Under The
)	Land Reclamation Act,
LINDA WEEKS, et al.,)	Sections
Petitioners,)	444.760-444.789, RSMo.
vs.)	
LARRY P. COEN, Staff)	
Director, Land)	
Reclamation Program,)	
Division of)	
Environmental Quality,)	
Respondent.)	

ADMINISTRATIVE HEARING

JUNE 6, 2008

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A P P E A R A N C E S

Appearing on behalf of Petitioners City of Osage Beach and City of Lake Ozark were MR. STEVEN E. MAUER and MR. JOHN T. POLHEMUS of Bryan Cave, L.L.P., 1200 Main Street, Suite 3500, Kansas City, Missouri 64105-2100. (816) 374-3244. Semauer@bryancave.com.

Appearing on behalf of Petitioners Linda Weeks, et al., was MR. BRIAN E. McGOVERN of McCarthy, Leonard, Kaemmerer, Owen, McGovern, Striler & Menghini, L.C., 400 South Woods Mill Road, Suite 250, Chesterfield, Missouri 63107. (314) 392-5200.

Appearing on behalf of the Applicant were MR. RICHARD S. BROWNLEE, III, and MR. ADAM R. TROUTWINE of Hendren Andrae, L.L.C., 221 Bolivar Street, Suite 300, Jefferson City, Missouri 65102. (573) 636-8135.

Appearing on behalf of the Respondent was MR. TIMOTHY P. DUGGAN, Assistant Attorney General, 221 West High, 8th Floor, Jefferson City, Missouri 65101. (573) 751-9802.

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This matter came on for hearing on June 6, 2008, before Administrative Hearing Officer W.B. Tichenor between the hours of 9:00 o'clock in the forenoon and 5:20 o'clock in the afternoon of that day, at the offices of the Missouri Department of Natural Resources, 1730 Elm Street, Jefferson City, Missouri 65102, before Judy K. Moore, a Certified Court Reporter within and for the State of Missouri, in a certain cause now pending before the Land Reclamation Commission, State of Missouri, between MAGRUDER LIMESTONE CO., INC., Applicant; Linda Weeks, et al., Petitioners; and LARRY P. COEN, Respondent.

HEARING OFFICER: The hearing will

come to order, the Missouri Department of Natural Resources Land Reclamation Commission formal public hearing in the matter of Magruder Limestone Company, Inc., Osage Beach Quarry, Miller County, Missouri, Applicant. This is a proceeding under the Land Reclamation Act, Sections 444.760 through 444.789, Revised Statutes of Missouri, expansion of Permit No. 0086. Lake Ozark/Osage Beach Joint Sewer Board, et al, Petitioners, versus Larry P. Coen, Staff Director, Land Reclamation Program, Division of Environmental Quality, Respondent.

This formal public hearing is being held at 9:00 a.m. Friday, June 6th, 2008, at the Roaring River Room, Department of Natural Resources Building, 1730 Elm Street, Jefferson City, Missouri. This formal public hearing is a continuation of the hearing that was held on June 4th and adjourned to this date. Hearing Officer W.B. Tichenor assigned by the Land Reclamation Commission presiding. All individuals please turn off cell phones and pagers at this time and leave them off until the hearing is adjourned.

Counsel for the parties are as follows:
Applicant appears by Counsel Adam Troutwine and

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<p>1 Richard S. Brownlee, III; Hendren & Andrae, L.L.C., 2 Jefferson City. Petitioner Joint Sewer Board appears 3 by Counsel Steven Mauer and John Polhemus of Bryan 4 Cave, L.L.P., Kansas City. Individual Petitioners 5 appear by Counsel Brian E. McGovern, McCarthy & 6 Leonard, et al., L.C., Chesterfield. Respondent 7 appears by Counsel Timothy Duggan, Assistant Attorney 8 General. 9 I believe at this time, Mr. Mauer, you are 10 recognized to present your expert witness, 11 Mr. Dressler; is that right? 12 MR. MAUER: Yes, your Honor. 13 Mr. Dressler is here and ready to go. 14 HEARING OFFICER: All right. If 15 Mr. Dressler would come forward and be sworn. 16 DONALD G. DRESSLER, 17 of lawful age, produced, sworn, and examined on 18 behalf of the Joint Sewer Board, deposes and says: 19 HEARING OFFICER: Please have a seat 20 in the witness chair. 21 EXAMINATION 22 QUESTIONS BY MR. MAUER: 23 Q. Good morning, Mr. Dressler. 24 A. Good morning. 25 Q. Would you please give your full name and</p>	<p>1 A. It's a vitae of my experience, a brief 2 encapsulation of about 40 years. 3 Q. All right. Are you a practicing civil 4 engineer? 5 A. Yes, sir. 6 Q. And how long have you been a licensed -- are 7 you a licensed civil engineer? 8 A. Yes. 9 Q. In what states are you licensed? 10 A. Missouri, Kansas, Oklahoma, Texas. 11 That's... 12 Q. Okay. Does BP-24 -- and how long have 13 you -- I'm sorry. How long have you been a 14 practicing civil engineer? 15 A. Since 1960. 16 Q. All right. Does BP-24 capture all of the 17 things that you've done in your 48-year career as a 18 practicing licensed civil engineer? 19 A. No, sir. It's pretty brief. 20 Q. All right. What I'd like to do is ask you 21 if BP-24 does set forth your educational experience 22 and some of the honors and other education that 23 you've received? 24 A. Yes, sir, it does. 25 MR. MAUER: Your Honor, we would</p>
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<p>1 your office address for court reporter so we have it 2 in the record, please. 3 A. Okay. It's Donald G. Dressler, V.E. The 4 office address -- there are two. One is at the Lake 5 of the Ozarks, 32677 Robin Wood Road, Gravois Mills. 6 And then the office in Overland Park, 4425 Indian 7 Creek Parkway, Overland Park, Kansas 66207. 8 Q. Mr. Dressler, are you here today as an 9 expert witness testifying on behalf of the Joint 10 Sewer Board of Osage Beach and the City of Lake 11 Ozark? 12 A. Yes, I am. 13 Q. Have you testified as an expert before? 14 A. Yes, I have. 15 Q. Have you been deposed before? 16 A. Yes, I have. 17 Q. Have you been certified as an expert witness 18 in the areas of civil engineering and blasting in 19 previous matters involving courts of law? 20 A. Yes, I have. 21 Q. All right. Would you please, sir, relate 22 for -- well, let me do it this way: Do you recognize 23 BP-24? 24 A. Yes. 25 Q. And what is BP-24?</p>	<p>1 offer BP-24. 2 MR. BROWNLEE: No objection. 3 HEARING OFFICER: No objection. It 4 is received. 5 Q. (By Mr. Mauer) Now, Mr. Dressler, I want to 6 talk a little bit about the things on BP-24. You 7 said that you're a licensed civil engineer. Can you 8 please tell Mr. Tichenor what it takes to become a 9 licensed registered engineer in the state of 10 Missouri? 11 A. Yes, I sure can. That was my home 12 registration, Mr. Tichenor, and you have to practice 13 after you graduate from an ABET accredited university 14 or college. K-State is one, K.U., University of -- 15 all the Missouri schools are. You graduate from 16 there and you take what's called an engineer and 17 training test. It's an eight-hour test over 18 everything that you had to demonstrate according to 19 the Missouri State Board of Technical Professionals 20 that you're competent to be an engineer. You're 21 still called an engineering intern at that time. 22 Then you practice under the tutelage of a 23 registered professional engineer for another four 24 years and then you take a final test. It's an 25 eight-hour test over everything that the Missouri</p>

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<p>1 State Board recognizes as necessary for an engineer. 2 Because in Missouri all engineering is classified as 3 engineering, whether civil, structural, mechanical, 4 electrical, nuclear, whatever. But an engineer is 5 all it is in Missouri. And so you pass that and then 6 you get a professional engineer seal and you take an 7 oath to protect public health, safety and welfare 8 first. And you can officially hang out your shingle 9 and you're qualified to do engineering work that you 10 seal. In some places it's required, some places it 11 isn't, and you're responsible for that work. And 12 that's pretty much...</p> <p>13 Q. Mr. Dressler, being a licensed registered 14 civil engineer in the state of Missouri, are you 15 required to obtain continuing course work and 16 continuing education in order to keep your license in 17 active status?</p> <p>18 A. Oh, yes.</p> <p>19 Q. Can you describe that to Mr. Tichenor?</p> <p>20 A. Yes. We have to take about 20 hours of 21 continuing education each year to maintain our 22 license and pay the fee, and then you get re-licensed 23 each year. It's a pretty lengthy process, similar in 24 all the other states around, too.</p> <p>25 Q. Mr. Tichenor, have you ever served as a</p>	<p>1 for my master of engineering.</p> <p>2 Q. And when did you obtain your master of 3 engineering degree?</p> <p>4 A. In '86.</p> <p>5 Q. And what was the emphasis of your Master's 6 of engineering degree?</p> <p>7 A. Damage assessment from seismic vibration.</p> <p>8 Q. And was that seismic vibration particularly 9 caused by anything?</p> <p>10 A. Primarily blasting, but it also included 11 earthquakes and truck traffic and other -- any kind 12 of seismic vibration.</p> <p>13 Q. So the emphasis of your Master's of 14 engineering degree was the damage that can be caused 15 by seismic vibrations?</p> <p>16 A. Yes.</p> <p>17 Q. Did you actually write a book that's bound 18 up and put together as a result of that 19 investigation?</p> <p>20 A. Yes. And it's been published as far as the 21 Johnson County Library system goes, but I'm told it's 22 been checked out several times by attorneys in the 23 Kansas City area.</p> <p>24 Q. Thank you. Have you received any special 25 recognition based on your areas of expertise and your</p>
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<p>1 lecturer or teacher or professor for any of these 2 continuing education courses or for engineering 3 courses?</p> <p>4 HEARING OFFICER: Just for the 5 record, it is addressed to Mr. Dressler and not Mr. 6 Tichenor. The Hearing Officer has lectured on 7 various other subjects and seminars but never 8 engineering.</p> <p>9 MR. MAUER: My apologies.</p> <p>10 Q. (By Mr. Mauer) Mr. Dressler --</p> <p>11 A. Well, I took it as a compliment, because the 12 beard and hair is wonderful.</p> <p>13 Q. Mr. Dressler, have you ever served as a 14 lecturer or professor or educator for any of these 15 continuing education courses or for any sort of 16 engineering education material?</p> <p>17 A. Yes, I have.</p> <p>18 Q. And what educational institutions have you 19 done that for?</p> <p>20 A. That was at the University of Kansas, 21 Lawrence, ad hoc professor for asbestos and 22 environmental certifications.</p> <p>23 Q. In addition to your undergraduate degree, 24 have you obtained any post-graduate degrees?</p> <p>25 A. Yes. I did that at the University of Kansas</p>	<p>1 years of service to the engineering community?</p> <p>2 A. Yes.</p> <p>3 Q. And what would that be?</p> <p>4 A. I was named a fellow in the American Society 5 of Civil Engineers, which is about as high a rating 6 as you can get from your peers and from the national 7 system.</p> <p>8 Q. Can you tell Mr. Tichenor approximately how 9 many fellows of the American Society of Civil 10 Engineering there are in the entire United States?</p> <p>11 A. Last time I checked there was about 3 to 400 12 in the United States. And a guess of mine, there's 13 probably 100 in the state of Missouri.</p> <p>14 Q. Please tell me, sir, have you received any 15 other education regarding such aspects of engineering 16 as environmental concerns?</p> <p>17 A. Yes, I have.</p> <p>18 Q. And what would that be?</p> <p>19 A. Some of my Master's degree was in 20 environmental aspects, but the most important one was 21 as a diplomat of environmental engineering in the 22 Academy of Environmental Sciences which we used to 23 use a lot and have been here before -- before MDNR 24 for landfills and quarries in the Kansas City area.</p> <p>25 Q. And can you tell Mr. Tichenor some of the</p>

1 issues of concern that were involved with your
2 American Academy of Environmental Engineers? What
3 types of things did you look at and investigate as
4 part of that environmental engineering?

5 A. This occurred about the same time as the
6 Clean Water Act, Clean Air and EPA federal
7 regulations concerning the environment.

8 Q. Did you investigate, then, potential
9 pollution and impacts of pollution, such as sewage
10 spills?

11 A. Yes. Yes, I did. Clean Water Act also.

12 Q. All right. Would you, then, please tell Mr.
13 Tichenor about your employment history after you
14 graduated from engineering school through today. I
15 understand I'm asking for 40-some years. If you
16 could give us a brief version.

17 A. I'll condense. First I went to work for
18 U.S. Steel, United States Steel, in Gary, Indiana,
19 doing engineering work and dredging out the Kankakee
20 River, because in those days you could walk across it
21 without much trouble from the flew dust
22 contamination.

23 Then I came to work -- went to work in
24 Kansas City for Havens Structural Steel as a
25 fabrication foreman of steel products and design of

1 those and as their OSHA safety officer, because that
2 was beginning to take effect in those days.

3 Then I went to work in Joplin, Missouri,
4 for Atlas Chemical which went through a lot of
5 transitions of being bought out and ended up to be
6 ICI America and Imperial Chemicals which became big
7 in chemicals and pharmaceuticals and paints worldwide
8 and worked at several locations all over the United
9 States and ended up in corporate headquarters in
10 Delaware.

11 And that's when we decided to come back to
12 Kansas City and to be home. And at that time I went
13 to work for Beyer Chemical in Kansas doing
14 engineer -- I was chief engineer there to do
15 engineering work and building of new buildings and
16 projects that was under FDA control. And at that
17 time also I decided to start my own practice and
18 worked part time for a number of years doing that on
19 engineering.

20 And then in 1986 the guys that were
21 working for me were making more money than I was
22 doing what was the safe traditional thing to be
23 doing, a full-time employer, regular paycheck, and so
24 I quit and worked full time for Dressler. And we
25 incorporated and have an office in Overland Park and

1 now one at Lake of the Ozarks also doing civil
2 engineering work pretty much throughout the Midwest
3 and sometimes at remote locations wherever we're
4 called to go. And that's pretty much it.

5 Q. Can you describe for Mr. Tichenor the types
6 of projects that Dressler Engineering works on?

7 A. Yes. It's basically a civil -- a
8 broad-based civil engineering firm. One group does a
9 lot of work in what's called forensic engineering,
10 and that's investigation of insurance claims on what
11 the true cause of the failure is. Another group
12 provides construction engineering services to
13 contractors, quarry operators, all kinds of utility
14 contractors that use explosives and dig trenches or
15 break rock or try to build things. And then another
16 section is civil engineering design, which is roads,
17 streets, sewers and site grading. I think that
18 pretty well covers it.

19 Q. All right. Mr. Dressler, does Dressler
20 Engineering and you in particular have a special
21 expertise in blasting?

22 A. Yes, we do.

23 Q. Would you describe that for Mr. Tichenor?

24 A. It's been a long-term development, but in
25 Kansas City I'm known -- and my son has been taught

1 much of it and is also recognized as a seismologist
2 in the firm -- as one of the premier firms that will
3 tell the truth exactly as it is to whoever it is.
4 And our reputation has been pretty much premier
5 because you don't get to be a fellow in civil
6 engineers without your peers voting for it. And so
7 in the Kansas City area it's been a very long and
8 successful career in blasting consulting, so much so
9 that sometimes we get known that thing -- I mean, the
10 public thinks all we do is just blasting, which isn't
11 true, but I mean, sometimes you get too good of a
12 reputation.

13 Q. Mr. Dressler, do you consider yourself to be
14 an expert on blasting, designing of blast plans,
15 scheduling of blasting, implementation of blasting
16 and the potential impacts of blasting?

17 A. Yes, very much so.

18 Q. All right. Let me also talk about, through
19 your firm and your education and your own personal
20 work, have you had the occasion to work and evaluate
21 with pipelines?

22 A. Yes, I have.

23 Q. Have you had the occasion to work with sewer
24 pipelines, including ductile iron and PVC?

25 A. Yes, I have.

1 Q. Could you describe some of that experience
2 and training to Mr. Tichenor?

3 A. A lot of the training that you get has to be
4 self-taught, because from the pipeline end of it,
5 whether it's gas transmission, utility transmission
6 or sewers in the ground for domestic sewers on
7 residential or business projects, you end up actually
8 teaching yourself from what the manufacturers put out
9 concerning ductile iron pipe, steel pipe and more
10 recently plastic pipe on what it can do, what it can
11 handle, all the limitations of it. Here's the right
12 way to install it, and then you draw it up the way
13 it's recommended. And basically all the engineers do
14 or all we do is just size the pipes and then make
15 construction specifications and design drawings to
16 compliment how it fits together so a contractor can
17 bid it and do the work.

18 Q. And through your employment and education,
19 do you consider yourself to be an expert in
20 pipelines?

21 A. Yes, sir.

22 Q. Have you had occasion to work with the
23 construction and installation of sewer pipelines?

24 A. A lot, yes, sir.

25 Q. Could you describe some of those

1 experiences, just a few, to Mr. Tichenor?

2 A. They range from installation of removing a
3 sewer pipe in the ground and cutting out in the rock,
4 because Kansas City is very similar in many ways to
5 Lake of the Ozarks as it's rock limestone everyplace.
6 And to make excavations, to make the trenches bigger,
7 because the sewers in many places existing have been
8 too small, and so there's all kinds of domestic and
9 for cities work in sewer construction or
10 rehabilitation. The biggest area that we've been
11 into is new construction, and that's the installation
12 of connecting storm sewers, water and sewers, to
13 gravity sewers in the Kansas City area to the
14 utilities. And some assistance we've given also to
15 Black & Veatch in construction of wastewater
16 treatment plants.

17 Q. As long as you mentioned it, have you had
18 occasion to work on construction projects for sewage
19 treatment plants?

20 A. Yes, I have.

21 Q. Could you describe that to Mr. Tichenor?

22 A. Well, it's going in a wastewater treatment
23 plant and trying to help out. Sometimes it's trying
24 to control odors that get out of hand. Usually
25 there's specialized problems that we get involved

1 with, but it's -- the construction of them are really
2 very straightforward and pretty non-innovative. I
3 mean, they don't change much, so far. They're
4 beginning to, but basically everything has been
5 pretty what you'd call textbook design.

6 Q. Mr. Dressler, as long as you mentioned it,
7 you said you involved work with gravity lines. Have
8 you also had experience working with pressure lines
9 or high pressure lines?

10 A. Yes. Limited, but most everything --
11 limited meaning there's probably been only four
12 projects that we've had to do forced pressure lines,
13 because they're more expensive and they're harder to
14 put in, but in some cases that's the only topography
15 that will allow you to do a sewer line that's
16 connected to a wastewater treatment plant is to pump
17 it, and that's called forced mains.

18 Q. So you have actually had occasion to work on
19 projects involving the construction and installation
20 of high pressure sewer lines?

21 A. Yes.

22 Q. All right. Can you describe the difference
23 between a gravity line and a high pressure sewer line
24 for Mr. Tichenor? What are the different issues
25 involved between the two types of lines?

1 A. Okay. The gravity sewer line is just what
2 it says. It isn't rocket science. It flows by
3 gravity, uphill to downhill, and downhill is at the
4 wastewater treatment plant. And the forced mains
5 will go over a terrain much like is here in the
6 Ozarks or where there's far out residential
7 developments or commercial, and you have to pump it
8 to get it up over the -- the sewage, raw sewage, up
9 over the hills or the valleys, and they're fairly
10 high pressure. Will range from 90 to 121 pounds PSI
11 pressure, which is classified as high pressure for a
12 pipeline. And that's how they work. Unfortunately,
13 they're very expensive, and you have to have big
14 pumps, dry wells, receiving wells, pump stations, to
15 receive it, get it in the line so that it gets from
16 where it is, like at Tan-Tar-A, to Osage Beach.

17 Q. Mr. Dressler, one last area of emphasis.
18 Have you had occasion during your experience as a
19 civil engineer to work with concrete?

20 A. Yes. You're not supposed -- it's changed a
21 little bit, but you're not supposed to be able to get
22 out of civil engineering school without knowing
23 concrete. And that was a phase that I was in. And I
24 had to work to get through college and I worked for
25 the State of Kansas laboratory, and that was in the

1 area of concrete, breaking concrete cylinders. And
2 then you assist some of the professors in research
3 projects on it. And I really like and enjoy working
4 with concrete, which is nice.

5 Q. As a civil engineer, during your course of
6 employment and in your professional practice, have
7 you had to design projects and work on projects
8 involving concrete?

9 A. Yes, I have.

10 Q. Do you consider yourself to be an expert in
11 concrete?

12 A. Yes, I do.

13 Q. And I think I asked, do you consider
14 yourself to be an expert in pipes, including sewage
15 treatment pipes?

16 A. Very much so, yes, sir.

17 Q. Okay. I'd like to ask you, then, about some
18 of your professional society memberships. Could you
19 tell Mr. Tichenor -- and you're welcome to look at
20 BP-24, which is the vitae that we've introduced.
21 Could you tell Mr. Tichenor about some of those and
22 what your involvement with some of those
23 organizations has been? I think it's right there on
24 the second page, Number 7.

25 A. Okay. Yes. Well, first is -- most

1 importantly is American Society of Civil Engineers.
2 I'm a lifetime member and also a fellow of that. And
3 that's probably the predominant organization
4 nationwide that civil engineers all work under and
5 through, and it's your mantra as far as a
6 professional society.

7 The American Concrete Institute, I've been
8 a continuing member because we get involved with all
9 kinds of concrete issues, from parking garages to --
10 concrete ones -- to construction of concrete
11 buildings and structures. The Professional Engineers
12 in Private Practice was -- I was past president of
13 that, and that was a membership of all professional
14 engineers who were owners of engineering firms in
15 Kansas City.

16 Then for a period of time I served as an
17 honorary position on the American Arbitration
18 Association to handle construction -- as an
19 arbitrator to handle construction disputes. Again,
20 it involved -- a lot of them were water lines in
21 rural districts that had been installed and then it
22 was messed up and who was -- who was at fault and
23 everything. But as an arbitrator it was a very --
24 kind of like the job that you do.

25 And then an honorary membership that I did

1 was a member of the Kansas Calgary, which was called
2 Ambassadors for Kansas, and you'd go around and talk
3 with people outside the state to relocate businesses
4 to the state of Kansas.

5 American Public Works Association is very
6 important for a civil engineer because all of our
7 work -- that's why you're called a civil career is
8 because you work for the people. And that particular
9 project -- I mean particular association is very
10 important for all, like, cities. Engineers and all
11 should belong to that because it really has a lot of
12 good design and helps on environmental issues, storm
13 water runoff and everything.

14 Member of the U.S. Green Building Council
15 because green building or the environmental, like a
16 carbon footprint, is becoming to be accepted and to
17 be done, and we do that. And then a member of the
18 HBA in Kansas City, because so many of our projects
19 are for builders of residential homes. So that's...

20 Q. Thank you, Mr. Dressler. I want to back up
21 and ask you just a couple of things. You've
22 described the areas of work that you've been involved
23 with through Dressler Engineering. You mentioned
24 investigation of claims. Can you tell -- has the
25 investigation of claims included investigation of

1 claims of damage caused by blasting?

2 A. Yes, very much so.

3 Q. Approximately how many claims have you
4 investigated involving allegations of damage by
5 blasting?

6 A. In my lifetime, I would give my best
7 estimate or guess would be over 300.

8 Q. And in those investigations, who were you
9 working for and what were you looking for?

10 A. Most usually we're working for an insurance
11 company to find out what the true cause of the
12 damages are. And sometimes we would be working for
13 the contractor, and on a few occasions we'd be
14 working for a homeowner or somebody who had received
15 damage from blasting and of that nature.

16 Q. In your work for Dressler Engineering, have
17 you worked for rock quarries?

18 A. Yes, we have. And we still are.

19 Q. Could you tell some of that experience to
20 Mr. Tichenor, please.

21 A. All right. We worked for Hunt Midwest when
22 they were doing a lot of blasting in all their
23 undergrounds out by the kids --

24 Q. Worlds of Fun?

25 A. Worlds of Fun. Thank you. Yeah. Because

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<p>1 that's all underground mining. It's classified as 2 quarry blasting but underground. In the open face 3 quarries, we've been doing work for a number of years 4 for O'Donnell Construction in the Kansas City area 5 around Olathe. We've worked for Martin Marietta in 6 the Greenwood, Missouri, area on their quarrying; 7 Deffenbaugh Construction, who does quarrying 8 operation and then fills it up with landfill. And 9 that's -- briefly that covers it.</p> <p>10 Q. All right. And --</p> <p>11 A. There's more, but enough is enough.</p> <p>12 Q. Have you also been involved with the actual 13 design of blast plans?</p> <p>14 A. Yes. Almost every construction blasting 15 plan that is done in Kansas City, Missouri; Leawood; 16 Shawnee and all the cities; Olathe and Lawrence, 17 Kansas, require that a blast plan be produced for the 18 contractor, which includes a lot of different things, 19 but yes, it's very much done. But there's 20 regulations that require it.</p> <p>21 Q. Okay. And have you been hired by any State 22 agencies to consult with them or been hired on any 23 State projects that would involve the potential 24 implication of blasting?</p> <p>25 A. One of our biggest clients who that has</p>	<p>1 A. And in that area. I mean, it's more than 2 Osage Beach.</p> <p>3 Q. Now, at this point in time, have you been 4 asked to evaluate any potential blast site on that 5 project?</p> <p>6 A. We're looking at the whole project at the 7 request of Alberdini who's the general contractor on 8 what areas can be ripped out rather than blasted, 9 because there's several areas that are of major 10 concern, building structures -- building and 11 structures that are sensitive to blasting and so you 12 don't want to do blasting where those are. And so 13 we're going through right now to determine which 14 areas can be ripped out, because it's a lot of rock 15 to cut, and then there's a few areas that will have 16 to be blasted and then get into designing a plan for 17 what needs to be done there.</p> <p>18 Q. Okay. Mr. Dressler, I want to show you what 19 I've marked as BP-53.</p> <p>20 MR. MAUER: This was Exhibit 7 from 21 the deposition yesterday.</p> <p>22 Q. (By Mr. Mauer) Do you recognize Exhibit No. 23 BP-53?</p> <p>24 A. Oh, yes.</p> <p>25 Q. And describe for Mr. Tichenor --</p>
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<p>1 happened with, but it's indirectly, hires -- they'll 2 be a contractor that would hire you, but it's -- 3 would be MODOT for the Bruce Watkins Trafficway. We 4 worked on that for several years. And so MODOT is 5 probably one of the biggest ones that fits that 6 definition.</p> <p>7 Q. And the Bruce R. Watkins, is that the 8 parkway that runs through Kansas City --</p> <p>9 A. Yes, sir.</p> <p>10 Q. -- from downtown southeast?</p> <p>11 A. Yes, sir, 71 Highway. J.E. Dunn 12 Construction uses us extensively on projects in and 13 around that involve blasting and safety design 14 required. Kidwell Construction.</p> <p>15 Q. Mr. Dressler, has your firm been recently 16 engaged to work on a MODOT project in the Osage Beach 17 area?</p> <p>18 A. Yes. We're into it all of roughly two to 19 three days.</p> <p>20 Q. All right. Can you tell Mr. Tichenor what 21 that project is?</p> <p>22 A. Yes. It's to assist the blasting contractor 23 and the general contractor to figure out rock cuts 24 and blasting for the 54 Bypass in Osage Beach.</p> <p>25 Q. All right.</p>	<p>1 MR. MAUER: It's a new one, your 2 Honor. It's one we haven't...</p> <p>3 Q. (By Mr. Mauer) Can you tell Mr. Tichenor 4 what is Exhibit No. BP-53?</p> <p>5 A. Yes. It's a blasting plan that we did for a 6 major project in downtown Kansas City called the 7 Plaza, and it was for the City of KCMO, J.E. Dunn 8 Construction and Kidwell Construction for a safe 9 blasting plan for about a 120-foot-deep rock cut in 10 the middle of the Plaza where blasting is not allowed 11 to construct a several million dollar commercial and 12 apartment complex in the Plaza.</p> <p>13 Q. Mr. Dressler, attached to BP-53, just so 14 we've got it on the record, there is a written report 15 and then an engineer's drawing; is that right?</p> <p>16 A. Yes, sir.</p> <p>17 Q. Could you fold out the engineer's drawing 18 for us, please?</p> <p>19 A. Sure.</p> <p>20 Q. And would you describe for Mr. Tichenor what 21 that drawing shows and the import of your engineer's 22 drawing for part of the blast plan.</p> <p>23 A. The outside footprint of this shows about 24 one city block in the Plaza on length and width, and 25 these are all the bore holes that were done and</p>

1 planned and how it was to progress to get all the
2 rock out of that deep hole because it had to be
3 hauled away and crushed up and things handled with
4 it. But it shows the patterns of the explosives that
5 were used and how they go about doing it, because it
6 went on for probably eight months almost around the
7 clock.

8 Q. Mr. Dressler, when you did your blast plan,
9 did you then design the blasting for the entire site?

10 A. Yes, we did.

11 Q. Did you take the -- you mentioned that this
12 was in Kansas City around the Plaza. Did you take
13 into consideration all of the structures and all of
14 the potential blasting impacts for the entire site?

15 A. Yes, we did, because blasting is not allowed
16 in the Plaza area.

17 Q. And so your blast plan, then, laid out all
18 of the shots and all of the design and considered all
19 of the potential impacts for the entire site before
20 you ever began?

21 A. Yes.

22 Q. And your blast plan -- the written, the
23 narrative part, just so I'm clear, at the top it's
24 referred to as a revised plan; is that right?

25 A. Yes.

1 Q. And why would you have revised the plan?

2 A. Well, because there was a problem in the job
3 that occurred and we were -- we designed the plan and
4 would observe it, and then there was an accident that
5 occurred and -- fly rock and people were injured
6 nearby, because it was a well-attended event every
7 time the blast went off. And then it ended up that
8 we got put in charge of seeing that everything was
9 done correctly and without exception, and that's why
10 it was a revised plan, because then we were in charge
11 and responsible for the blasting operation.

12 Q. So after the blasting had begun, it was
13 necessary based on the experience of when you were
14 actually involved into the project to actually have
15 to come in and revise the plan?

16 A. Yes.

17 Q. Is there any project, any blast plan, that
18 you've ever done that you could say once this is
19 designed nothing could happen in the field, nothing
20 could occur such that I'd ever -- I will never, ever
21 want to make a change to the plan?

22 A. No, sir. That just doesn't happen.

23 Q. Okay. Now, you mentioned an accident that
24 occurred. Is there any plan that you've ever
25 designed that you could guarantee is 100 percent

1 accident-proof?

2 A. No. You can't.

3 Q. Is there any sort of blasting you're ever
4 aware of that doesn't have some sort of inherent risk
5 or potential for damage?

6 A. There isn't any.

7 MR. MAUER: Your Honor, we would
8 offer BP-53.

9 HEARING OFFICER: BP-53 has been
10 offered into evidence. Any objection.

11 MR. BROWNEE: Not from us, your
12 Honor.

13 MR. MCGOVERN: No.

14 HEARING OFFICER: No objection?
15 BP-53 is received into evidence.

16 Q. (By Mr. Mauer) Mr. Dressler, I'd like to
17 talk with you, then, about your work on behalf of
18 this project. Now, I want to be clear. First of
19 all, have you and I ever worked on a project or case
20 before?

21 A. No, sir.

22 Q. So this is the first time you've ever worked
23 with me involving any sort of project; is that right?

24 A. Yes, or even your firm.

25 Q. Okay. And have you ever been engaged by the

1 Joint Sewer Board of Osage Beach and Lake Ozark?

2 A. No, sir, I haven't.

3 Q. All right. Now, with respect to your
4 report, were you asked to design a blast plan for the
5 entire Magruder site?

6 A. No, sir.

7 Q. So what were you asked to do with respect to
8 the blast plan that was proffered by Dean McDonald
9 and Dr. Worsey?

10 A. To look at it, review it, see if it provided
11 the amount of protection and safety aspects for the
12 vibration levels that would occur to the transmission
13 line through the Magruder property.

14 Q. Were you also asked to evaluate the
15 potential impact of the blast of the quarry
16 operations on the lines and the sewage treatment
17 plant?

18 A. Yes, sir.

19 Q. And have you done that?

20 A. Yes. And that's because they're really all
21 one structure.

22 Q. I understand. And as a result of your work
23 and your review, have you reached some conclusions
24 about the -- and opinions about the potential impact
25 of a quarry operation on the sewage treatment lines

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<p>1 and the sewage treatment plant?</p> <p>2 A. With what's been addressed and handled, it</p> <p>3 would be inadvisable to do a quarry operation with</p> <p>4 the way it's been shown and for all the aspects of</p> <p>5 damage prevention that isn't really covered.</p> <p>6 Q. Okay. Is it fair to say that as a result of</p> <p>7 your review one of your opinions is that the blast</p> <p>8 plan proffered is, at best, incomplete?</p> <p>9 A. Incomplete. Another word for it is</p> <p>10 inadequate, because it touches on various things</p> <p>11 enough to make a point, but it doesn't cover all of</p> <p>12 the property. It doesn't cover all of the items.</p> <p>13 And, I mean, for it to happen correctly, you've got</p> <p>14 to look at all the aspects of safety issues,</p> <p>15 environmental issues, and how much can those lines</p> <p>16 stand. And that hasn't been done yet.</p> <p>17 Q. All right. Have you brought with you --</p> <p>18 well, is there in front of you a copy of the report</p> <p>19 that has been prepared setting forth your expert</p> <p>20 opinions?</p> <p>21 A. Yes. It's been prepared and forwarded.</p> <p>22 Q. And is in front of you a copy of your report</p> <p>23 that you originally did, BP-24?</p> <p>24 A. No, sir. I don't have that.</p> <p>25 Q. Oh, I'm sorry. BP-25?</p>	<p>1 sewage spill, human sewage spill, untreated</p> <p>2 pathogens, that will occur. And there's economic</p> <p>3 problems that would occur because of that shutdown</p> <p>4 and how long it would be. It's just unacceptable</p> <p>5 failures in that line section, let alone what could</p> <p>6 occur to the wastewater treatment plant. But the</p> <p>7 most susceptible and the most tragic ones would be a</p> <p>8 break of any kind or failure of any kind to the lines</p> <p>9 that go through that property.</p> <p>10 Q. Mr. Dressler, when you are working on blast</p> <p>11 plans or projects, does the size of the risk go into</p> <p>12 your evaluation of what type of blast might be</p> <p>13 acceptable; or what type of activity in and around</p> <p>14 the sewage treatment plant or the sewage lines to be</p> <p>15 protected, does that factor into your equation as</p> <p>16 you're designing a plan in construction?</p> <p>17 A. That's number one, and that hasn't been done</p> <p>18 on these.</p> <p>19 Q. And explain to Mr. Tichenor how you would</p> <p>20 evaluate the size of risk that is involved should the</p> <p>21 lines or the sewage treatment plant be damaged.</p> <p>22 A. Should damage occur there, just the clean-up</p> <p>23 from it would be in the millions of dollars for</p> <p>24 clean-up and possible environmental contaminations to</p> <p>25 the Osage River and to the little dry weather creek</p>
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<p>1 A. Yes.</p> <p>2 Q. And is that a copy of the report that sets</p> <p>3 forth your conclusions and your evaluation of the</p> <p>4 blast plan and the proposed Magruder operation?</p> <p>5 A. Yes, sir, it does.</p> <p>6 Q. All right.</p> <p>7 A. It's more specific.</p> <p>8 Q. All right. Can we turn to Page 2 of your</p> <p>9 report?</p> <p>10 A. Yes.</p> <p>11 Q. And if you want me to run this, I'll be glad</p> <p>12 to.</p> <p>13 A. It would probably be safer, frankly. I</p> <p>14 don't know if Mr. Tichenor can see it.</p> <p>15 HEARING OFFICER: I can see it. I</p> <p>16 have a copy in front of me, and I can see it.</p> <p>17 MR. DRESSLER: Okay. Good.</p> <p>18 Q. (By Mr. Mauer) The second page is called</p> <p>19 "Protecting the Lines." Before we begin, would you</p> <p>20 please tell Mr. Tichenor why you believe it is</p> <p>21 important to protect the sewer lines that cross the</p> <p>22 Magruder property.</p> <p>23 A. Yes, I can. Because anything at all happens</p> <p>24 to those lines where they are on the Magruder</p> <p>25 property, there is a cataclysmic event of tragic</p>	<p>1 that runs through there, through the place. The</p> <p>2 economic shutdown of many businesses, starting with</p> <p>3 Tan-Tar-A and going forward all the way up to the</p> <p>4 wastewater treatment plant, would be tremendous, and</p> <p>5 there isn't any quick fix on them. And if that line</p> <p>6 breaks, things don't happen anymore, and it would be</p> <p>7 a dollar sign I haven't been able to put to it yet,</p> <p>8 except I know it would be huge.</p> <p>9 Q. Mr. Dressler, in designing a plan or</p> <p>10 evaluating -- better evaluating a plan that involves</p> <p>11 such substantial risk, would you have expected to see</p> <p>12 some sort of back-up or failsafe so that in the event</p> <p>13 a break occurs there would at least be measures</p> <p>14 already in place to try and minimize the risk or</p> <p>15 mitigate the damage?</p> <p>16 A. Yes. There should have been some notice</p> <p>17 that this would have been installed.</p> <p>18 Q. And --</p> <p>19 A. Because the wastewater treatment, people</p> <p>20 really wouldn't know that there's a leak because</p> <p>21 there are no alarms on this line. It was designed as</p> <p>22 a line should be, but there's no alarms or anything</p> <p>23 that would let them know that there is a break. And</p> <p>24 the time from when they would know there was a break</p> <p>25 on a line and be able to get to try to fix it or</p>

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<p>1 contain the spill would be in the neighborhood of</p> <p>2 eight to 24 hours, and there's a lot of gallons of</p> <p>3 human sewage that is a pathogen, a contaminant,</p> <p>4 that's not allowed to be flowing over the ground and</p> <p>5 into the little creek and even into the Osage River.</p> <p>6 Q. Mr. Dressler, you mentioned the</p> <p>7 contamination. Would you have expected to see in a</p> <p>8 designed -- in a proposed quarry design plan or a</p> <p>9 blast plan, would you have expected to see some sort</p> <p>10 of attempt to build a retention basin or a detention</p> <p>11 basin or having equipment on site in case of an</p> <p>12 emergency to make sure that the spill could be</p> <p>13 minimized or mitigated?</p> <p>14 A. Yes, I would have.</p> <p>15 Q. Okay. In your --</p> <p>16 A. None was mentioned.</p> <p>17 Q. So in review of your plan, did you find</p> <p>18 anything like that even considered by the proposed</p> <p>19 Magruder operation or the blast plan?</p> <p>20 A. No, I didn't. I was looking for it, and</p> <p>21 there was no mention of it made.</p> <p>22 Q. What did it tell you about the factors</p> <p>23 considered by the blast plan or the quarry</p> <p>24 application that there was just nothing addressed</p> <p>25 about potential mitigation of a spill or leak should</p>	<p>1 construction. And I went to Atlanta to visit the --</p> <p>2 and talk with the research engineers for the ductile</p> <p>3 iron industry manufacturers which is located in</p> <p>4 Atlanta and Dallas and a lot of other places, but</p> <p>5 that's where all the engineering people that are</p> <p>6 responsible for setting how much their pipe can</p> <p>7 withstand, and it's called acceptable vibration</p> <p>8 levels. Because all manufacturers do this on, you</p> <p>9 know, whether it's a piece of x-ray equipment or</p> <p>10 whatever is most acceptable, the manufacturer that</p> <p>11 makes those establishes vibration levels that the</p> <p>12 piece of equipment that you're buying, like a TV, a</p> <p>13 TV has acceptable vibration levels that can occur</p> <p>14 during shipment and all kinds of things. And so they</p> <p>15 all have it and it's known. Unfortunately for</p> <p>16 ductile iron, there has been no research done.</p> <p>17 MR. BROWNEE: Your Honor, I'm going</p> <p>18 to object to this conclusion. This is hearsay. He's</p> <p>19 talked to somebody in Atlanta and he's offering an</p> <p>20 opinion based upon those hearsay discussions.</p> <p>21 MR. MAUER: He's an expert, your</p> <p>22 Honor. That matter has been relied on very clearly</p> <p>23 that an expert has been allowed to rely upon</p> <p>24 learned --</p> <p>25 HEARING OFFICER: He's an expert. He</p>
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<p>1 it occur?</p> <p>2 A. Because there isn't going to be any, so</p> <p>3 don't need to worry about it.</p> <p>4 Q. Did it cause you concern that --</p> <p>5 A. I think that's called cavalier, but English</p> <p>6 is not my strong suit.</p> <p>7 Q. Going on under "Protecting the Lines," your</p> <p>8 first bullet is "Condition of the lines not known."</p> <p>9 Can you explain to Mr. Tichenor why that's important?</p> <p>10 A. The condition of the lines is based on a lot</p> <p>11 of things; how it was installed, exactly how old it</p> <p>12 is, what they look like, which there needs to be an</p> <p>13 excavation probably made. And I dug through as much</p> <p>14 stuff as was available from the original</p> <p>15 construction, and there still isn't enough known</p> <p>16 about the condition of those lines to make an</p> <p>17 evaluation of how much vibration level they can</p> <p>18 withstand.</p> <p>19 Q. Did you make any efforts to try and evaluate</p> <p>20 the type of -- make any extra effort to get</p> <p>21 information about what type of vibrations could be</p> <p>22 withstood by the ductile iron pipe or the PVC pipe?</p> <p>23 A. Okay. Yes, I did. I spent a lot of time on</p> <p>24 ductile iron because that's a very superior sewer</p> <p>25 pipe for forced mains and to use in -- for city</p>	<p>1 may rely on sources generally recognized within the</p> <p>2 industry. It might be helpful if he could identify</p> <p>3 more specifically the individual as far as title,</p> <p>4 position with the company and how recent this was,</p> <p>5 but he can rely upon hearsay representations from</p> <p>6 other persons in the industry. So, Mr. Mauer, if we</p> <p>7 could have the witness establish as far as more</p> <p>8 specifically the source of this information.</p> <p>9 MR. MAUER: Certainly.</p> <p>10 Q. (By Mr. Mauer) Mr. Dressler, you understood</p> <p>11 that one of the pipes crossing the Magruder property</p> <p>12 is a ductile iron pipe; is that right?</p> <p>13 A. Yes, it is.</p> <p>14 Q. Were you able to find in any of the</p> <p>15 published literature an initial baseline of what</p> <p>16 vibrations were acceptable for the ductile iron pipe?</p> <p>17 A. No, I wasn't.</p> <p>18 Q. So then did you go the extra step to</p> <p>19 actually contact the manufacturer representative in</p> <p>20 Atlanta to try and find out what the manufacturer</p> <p>21 would say would be the acceptable vibration level?</p> <p>22 A. Yes.</p> <p>23 Q. All right.</p> <p>24 A. That information is in my file. I don't</p> <p>25 have it carrying on the top of my head, but it is in</p>

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<p>1 the file and the book the guy I talked with. He's</p> <p>2 the chief research engineer for the Ductile Iron</p> <p>3 Manufacturers Association. And I have his name, and</p> <p>4 it was done probably two months ago when this was</p> <p>5 beginning to surface that that hadn't been done and</p> <p>6 why wasn't it, and that's what I found out.</p> <p>7 Q. And were you able to find out any baseline</p> <p>8 standards, even from the industry, as to what level</p> <p>9 of vibrations would be acceptable to a ductile iron</p> <p>10 pipe like we have in the ground on the Magruder</p> <p>11 property?</p> <p>12 A. No, I wasn't.</p> <p>13 Q. And was that the point of your call and the</p> <p>14 reason why you were doing that investigation?</p> <p>15 A. Yes, because that just didn't -- it didn't</p> <p>16 seem correct to me that they wouldn't have that.</p> <p>17 Plastic, PVC pipe people do, but not ductile iron.</p> <p>18 Q. Now, the condition of the lines not known.</p> <p>19 I have a question for you. There's been some</p> <p>20 suggestion that it may be ten years or even longer</p> <p>21 before the Magruder quarry operation actually gets to</p> <p>22 blasting close to the ductile iron line and the PVC</p> <p>23 pipe. I want to ask you about that. The condition</p> <p>24 of the lines as they're in the ground, do pipelines</p> <p>25 stay in pristine condition once they're placed</p>	<p>1 Q. Okay.</p> <p>2 A. So there's a slight difference.</p> <p>3 Q. There has been some suggestion that it may</p> <p>4 be many years before Magruder's quarry operation</p> <p>5 crosses the pipelines and actually extends up close</p> <p>6 to the sewage treatment plant on the east side of the</p> <p>7 sewage treatment plant.</p> <p>8 A. Yes, sir.</p> <p>9 Q. Is the duration of the time that it takes</p> <p>10 for Magruder's operation to be next to the sewage</p> <p>11 treatment plant, is that going to make any difference</p> <p>12 in factoring the potential danger to the sewage</p> <p>13 treatment plant itself?</p> <p>14 A. I'd expect the wastewater treatment plant,</p> <p>15 sewage treatment plant, to be weaker because of the</p> <p>16 age from corrosion and from the units, the digital</p> <p>17 equipment that's there and the analog equipment to</p> <p>18 age, and it will be weaker.</p> <p>19 Q. So if you were asked -- had been asked to</p> <p>20 design a blast plan for the proposed quarry</p> <p>21 operation, would you have stopped at the initial site</p> <p>22 of the anticipated beginning of the quarry and just</p> <p>23 not even evaluated the sewage treatment plant and the</p> <p>24 impact on the sewage treatment plant when the site</p> <p>25 gets close to the treatment plant?</p>
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<p>1 underground?</p> <p>2 A. No, they do not.</p> <p>3 Q. Do they deteriorate?</p> <p>4 A. Yes, they do.</p> <p>5 Q. Do they -- do pipelines have to be replaced</p> <p>6 simply because they break down due to natural causes?</p> <p>7 A. Yes, they do.</p> <p>8 Q. And so even assuming that it's ten years</p> <p>9 before Magruder's operation approaches close to the</p> <p>10 pipelines, are the pipelines going to be in a better</p> <p>11 condition in ten years than they are today?</p> <p>12 A. No, they won't. They age much like people</p> <p>13 do, and the longer it is, the more susceptible they</p> <p>14 are to breakage, because steel, whether it's ductile</p> <p>15 iron or steel that's on gas pipelines, as it ages, it</p> <p>16 gets weaker.</p> <p>17 Q. All right. And let me ask the same thing</p> <p>18 about the concrete in the sewage treatment plant.</p> <p>19 Now, the sewage treatment plant, does concrete, is it</p> <p>20 susceptible to wear and aging?</p> <p>21 A. Well, you have a bit of a mixed metaphor</p> <p>22 there because it is susceptible to wear, but its</p> <p>23 chemical strength does increase almost forever. And</p> <p>24 so due to age concrete does not weaken, but the</p> <p>25 corrosion that is occurring on it does increase.</p>	<p>1 A. No, I wouldn't.</p> <p>2 Q. And why not?</p> <p>3 A. Well, because that's not the whole picture.</p> <p>4 And if it's going to be 20 years or 30 years, it</p> <p>5 really doesn't matter. The conditions are going to</p> <p>6 change in the lines, on the lines, and at the</p> <p>7 wastewater treatment plant because of age. And so</p> <p>8 unless you're just looking for an answer that you'd</p> <p>9 like to have, then you stop, but if you're looking</p> <p>10 for a total answer, it should have gone on.</p> <p>11 Q. Okay. Thank you. The next bullet point</p> <p>12 you've got on Page 2 is "Lines are structures within</p> <p>13 the Missouri Blasting Safety Act." Why do you</p> <p>14 believe that the sewage treatment lines are</p> <p>15 structures within the Act?</p> <p>16 A. Because it's connected to, and according to</p> <p>17 standard definitions, they're part of the structure,</p> <p>18 which is the wastewater treatment plant. Which no</p> <p>19 one is arguing that especially, but they're an</p> <p>20 integral part of that building. It doesn't work</p> <p>21 without it, in other words, the treatment plant, and</p> <p>22 so therefore it's structure.</p> <p>23 Q. Mr. Dressler, even if the lines are</p> <p>24 technically not within the definition of an</p> <p>25 uncontrolled structure of the Missouri Blasting</p>

12 (Pages 42 to 45)

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<p>1 Safety Act, does that mean, then, that you can just 2 ignore them or not consider them or not take measures 3 to protect them as the Act would require for other 4 structures? 5 A. No, it doesn't, but it needs to have a 6 qualification. It doesn't have to unless you just 7 don't give a hoot about what could happen and go 8 wrong. And so that doesn't -- even if the law is 9 that, the new blasting law, then there's going to 10 have to be a change in it because it's wrong to not 11 right whatever -- to ignore a safety issue when 12 there's one there just because it's not covered by 13 the statute. 14 Q. Below the lines or structures within the 15 Missouri Blasting Safety Act, your next point is 16 "Blasting distance setback 766 feet to 900 feet from 17 the lines." Can you explain that to Mr. Tichenor and 18 what you mean by that? 19 A. Yeah. Just a very casual application of 20 this new blasting law is a scale distance of 55 and 21 applying what the distance would be that the blaster 22 would have to stay away without using a seismograph. 23 And so I used that as here's one distance that's 24 protecting this contentious structure issue of the 25 pipelines that will show a distance of some sign that</p>	<p>1 Q. -- than 700 -- 2 A. Yes, I have. 3 Q. So why is it that in this instance you've 4 set forth this 760-foot calculation? Tell that to 5 Mr. Tichenor. Explain that to him. 6 A. That was the best evaluation with regard to 7 the law, which we should try to follow now that the 8 numbers are there. Because just putting a 9 seismograph there doesn't do anything except give you 10 readings. You have to take responsible action if the 11 numbers are getting too high on the inches per second 12 and do something about it. And you gotta know how 13 much vibration is occurring to those lines, because 14 the lines have a vibration threshold that shouldn't 15 be exceeded, which is unknown at this time. And so 16 just putting a seismograph there really doesn't do 17 anything except technically make you in compliance 18 with the law. 19 Q. And let me make sure we're clear on that. 20 The seismograph would measure the amount of vibration 21 impact that's being impacted on the sewage treatment 22 lines; is that right? 23 A. Yes. 24 Q. And the amount of impact or the base level 25 that would be acceptable is something that typically</p>
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<p>1 even the Act says is where you don't have to use a 2 seismograph if you stay outside that distance, which 3 would imply to me that somebody thinks that 4 construction or quarry blasting, if it's kept 5 766 feet away -- for the size blast, the explosives 6 that they're going to be using in this quarry -- 7 would be safe unless you use a seismograph. And so 8 that's how I came up with those numbers and why I 9 used them is it would give some relevance to, you 10 need to stay away from those lines. 11 Q. Okay. Now, I want to talk about this use of 12 a seismograph, because Dr. Worsey, I understood his 13 testimony to be that this calculation you're giving 14 is really meaningless because all it means is within 15 766 feet all you have to do is use a seismograph as 16 compared to not meaning that you can't blast that 17 close to the lines. So I want to make sure we're 18 clear. Is it your testimony that you can never blast 19 closer than 766 feet to a sewage treatment line 20 anywhere? 21 A. No. 22 Q. Okay. In fact, have you been involved in 23 projects where you've designed blasts to be much 24 closer -- 25 A. Yes.</p>	<p>1 for the kind of line might be established by the 2 manufacturer? 3 A. Well, yes. Of course. And that's unknown 4 at this point. 5 Q. Right. And is that the problem with the 6 ductile iron that you encountered is that you 7 couldn't find the baseline for the acceptable level 8 for the ductile iron pipes? 9 A. That's correct. 10 Q. Now, we've had a lot of talk about a study 11 called RI 9523. Do you see that? 12 A. Yes. 13 Q. All right. And RI 9523, are you familiar 14 with it? 15 A. Yes, I am. 16 Q. For the type of information set forth and 17 the study done, does RI 9523 -- do you agree with it? 18 A. Yes, sir. 19 Q. Simply put, does RI 9523 involve a ductile 20 iron pipe? 21 A. No. 22 Q. Does it involve steel pipelines? 23 A. Sort of. High-strength steel line welded 24 construction, yes. 25 Q. All right. And so we had testimony from Mr.</p>

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<p>1 Worsey -- I'm sorry -- from Dr. Worsey, from 2 Mr. Henderson and from Mr. Mirabelli about that study 3 and about the impact of blasting close to 4 high-strength steel. Would you disagree with the 5 findings in that report, RI 9523, on the impact of 6 blasting next to high-strength steel? 7 A. No. 8 Q. And do you believe that you can translate 9 the impact of blasting on a high-strength steel to 10 the ductile iron pipe or the 18-inch PVC line that's 11 in the ground on the Magruder property? 12 A. No, you can't. They're dissimilar. 13 Q. In what ways are high-strength steel or the 14 pipes used in RI 9523 different from ductile iron and 15 the particular 18-inch PVC line that we have in 16 place? 17 A. Their chemical make-up, their molecular, 18 structural, and their stress strain curve that 19 applies to steel, that is very different. 20 Q. So simply because a blasting test was done 21 near high-strength steel and they could get within -- 22 you know, get up to 150 feet and be okay, does that 23 mean that you can be within 150 feet of the ductile 24 iron line and the PVC line on the Magruder property 25 and have no potential impact?</p>	<p>1 HEARING OFFICER: No objection. It 2 is received. 3 Q. (By Mr. Mauer) The next point on Page 2 is, 4 "Even at these distances, safety of the lines cannot 5 be guaranteed." Can you explain to Mr. Tichenor what 6 you mean by that, sir? 7 A. Yes. Because any vibration for these lines 8 with the safety severity that they have is 9 unacceptable. Another term for it is zero tolerance 10 for vibration. Because any -- and guarantees are 11 100 percent, they're not 95 that engineers -- we 12 engineers try to hide behind, 95 percent correct, but 13 for these lines it needs to be 100 percent. And 14 that -- it doesn't do it. 15 Q. Is there anything else on Page 2 that I 16 haven't asked you about? Otherwise I'll move on to 17 Page 3. 18 A. No. 19 Q. All right. Now, we've talked a little bit 20 about the sewage treatment facility, and we've talked 21 about how the quarry will move closer to the 22 facility. I have a question for you, though. Your 23 second bullet point says, "Simply because blasting on 24 different grade does not mean facility will not be 25 impacted." And as I understand the suggestion of --</p>
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<p>1 A. No, it doesn't. 2 Q. So other than as a reference point, does 3 RI 9523 decide the day and tell us exactly what we 4 can and can't do in this case? 5 A. I beg your pardon? 6 Q. Other than being some sort of reference 7 point, does RI 9523 -- if we simply follow what was 8 done in that case, does that mean the lines will be 9 safe and protected here? 10 A. Absolutely not. 11 MR. MAUER: I don't know, your Honor, 12 if RI 9523 has been offered yet or not, it's been 13 discussed so many times, but if not, I would offer 14 RI 9523. 15 MR. MCGOVERN: No objection. 16 HEARING OFFICER: It's marked as 17 Exhibit 8. 18 MR. MAUER: I think that might have 19 been from his deposition. 20 HEARING OFFICER: All right. Then 21 we'll mark as BP-54... This is the report of 22 Investigation 9523. It's being offered into 23 evidence. Any objection? 24 MR. MCGOVERN: No objection. 25 MR. BROWNLEE: None.</p>	<p>1 I'm not sure if it was Mr. Worsey -- Dr. Worsey, 2 Mr. Henderson or Mr. Mirabelli, but there was a 3 suggestion that because the sewage treatment plant is 4 on a different elevation from the blasting on site A 5 where they propose to start, it's lower, and then 6 perhaps when they get to the east of the sewage 7 treatment plant it might be higher, that simply 8 because it's on a different elevation or there might 9 be a creek running next to it that that somehow means 10 that there won't be any sort of vibration impact on 11 the sewage treatment plant. Can you respond to that, 12 please? 13 A. Yes. There's a big difference between any 14 and a little. And, yes, it is true there will be 15 less vibration in the scenario that has been 16 projected, but there still will be some that occurs, 17 but it will be less because of the height difference 18 in part of the paths that the seismic vibrations 19 travel, how they get there. 20 Q. And would that same be true with respect to 21 the impact on the sewage treatment lines itself, that 22 if the blasting is occurring at an elevation above 23 the lines, does that mean there will be no impact? 24 A. No, it doesn't mean no. 25 Q. All right. Let me show --</p>

14 (Pages 50 to 53)

1 A. It doesn't work that way. There would be
2 less, yes, but not -- some will still be occurring.

3 Q. Let me show you what I've marked as BP-55,
4 and during the testimony yesterday there was a
5 question -- and I think it was actually posed by Mr.
6 Tichenor himself -- about whether the shot, if it
7 were at an elevation raised above the pipeline, if
8 the shot would actually -- the vibrations would
9 impact in a downward direction towards the sewage
10 treatment line. And you can see I've modified the
11 diagram there to raise the shot level. Now, my first
12 question is, on BP-55, does it have -- would the shot
13 actually go out in a straight horizontal level, as
14 what's shown on BP-55 at this point?

15 A. No, they don't. They go out --

16 Q. Let me give you a red pen, and if you would,
17 just demonstrate for Mr. Tichenor on BP-55, how will
18 the vibrations actually go out?

19 A. They go out on the directional --

20 MR. BROWNEE: Is there any way we
21 could also share that?

22 HEARING OFFICER: All right. Can
23 each attorney see? The witness has drawn a series of
24 red circular patterns below the words "Shot
25 initiation" on BP-55.

1 Q. (By Mr. Mauer) Explain to Mr. Tichenor what
2 those vibration patterns mean.

3 A. Those are the vibration patterns that the --
4 the velocity of the explosion, the force of it, has
5 caused. And that's what breaks the rock. And
6 actually you've got to think even smaller, that each
7 one of these waves that comes out, because they come
8 out all directions, not just one but all directions,
9 and each one of these little soil particles or rock
10 particles that's moving has three directions, X, Y
11 and Z, and so it's traveling out much like radio
12 waves do from a transmitting tower. And then as
13 they -- because this explosive all goes off at one
14 instant, unless it's decked or made to be different,
15 but usually it's -- and I think ANFO was being used
16 here -- is it will all go off at one time and so the
17 waves go out every direction.

18 Q. As a result, even if the elevation of the
19 shot is above the line or the sewage treatment plant,
20 will there still be a vibration impact on the plant
21 or the line?

22 A. Yes.

23 Q. The next thing that you've identified is
24 the -- "Protecting the Treatment Facility." And your
25 bullet point there is "Report/blast plan contains

1 little information on impact to plant and any info
2 involves concrete structures." Can you explain to
3 Mr. Tichenor what you mean by that?

4 A. What I mean is nothing was said about how
5 the plant or the lines really were going to be
6 protected. There wasn't any -- there was a
7 tremendous amount of things that could be listed that
8 should be done that would provide protection for the
9 plant or the lines, and it wasn't listed. It was a
10 great rock-breaking plan but not a great safety
11 blasting plan.

12 Q. I want to show you one other thing. This is
13 a picture from the report of Mr. Henderson, and it's
14 a picture of the Capital Quarries here in Jefferson
15 and it's an aerial view, I believe taken from Google,
16 showing the Capital Quarries and --

17 HEARING OFFICER: This has previously
18 been admitted into evidence?

19 MR. MAUER: Yes, your Honor. This is
20 just one of the slides. Unfortunately, it's not
21 named, but it came about three slides after Page 18,
22 I believe.

23 Q. (By Mr. Mauer) The thing I want to ask you
24 about, Mr. Dressler, on this page Mr. Henderson
25 testified that this was a photograph, Google

1 photograph, from the -- of the Capital Quarries
2 depicting both the edge of the quarry and then
3 Wal-Mart. Do you see those two things shown on
4 there?

5 A. Yes, I do. Uh-huh.

6 Q. And he also testified that there was a ditch
7 between where they were blasting and the Wal-Mart
8 facility. Okay?

9 A. Yes.

10 Q. Now, he said that even though there is a
11 ditch, there would still be vibrations felt at the
12 Wal-Mart crossing from the quarry when they blast
13 across the ditch and being felt at the Wal-Mart on
14 the other side of the ditch, and I just want to know,
15 would you agree with that, that, in fact, even though
16 there's a ditch there's still going to be blasting
17 vibrations impacted on the other side of the ditch?

18 A. Yes, there will.

19 Q. So will the blast simply hit the ditch --
20 the vibrations simply hit the ditch and stop?

21 A. No. It travels in the surface of the rock
22 and the substrate. There's only one seismic
23 vibration that travels on the absolute surface,
24 that's called the roll wave, and that's the one --
25 that's the ones that get up clear to the very top of

1 the ground or existing level. All the others still
2 keep on moving in the rock.

3 Q. Okay. So --

4 A. Or water, whatever's there.

5 Q. So for the purposes of that testimony from
6 Mr. Henderson, if I've characterized it correctly,
7 would you agree with him on that point?

8 A. Yes, I would.

9 Q. All right. If you'd go back to BP-55 for
10 one minute, I'd like to ask you about your drawing,
11 because the drawing there doesn't have any
12 consideration of the potential strata of the rock,
13 and I want to talk to you about that. If there's --
14 even if the shots are on a different elevation, does
15 all rock strata lie absolutely horizontal?

16 A. On this site, it is relatively level.

17 Q. Okay. Is there any way to know without --
18 until you actually start the investigation, is there
19 any way to know what deviations might actually exist
20 in the rock strata?

21 A. Yes.

22 Q. And how is that?

23 A. You do a rock boring through the level, and
24 it will tell you if there's ground water there, karst
25 topography. It will address what's underground that

1 you can't see.

2 Q. In the blast plan did you see any
3 information about extensive drillings taken and core
4 samples taken on this proposed site?

5 A. No. There was none.

6 Q. All right. Now, you mentioned karst
7 topography, and we'll talk about that some more, but
8 before we leave BP-55, would the impact of karst
9 topography also need to be considered when trying to
10 evaluate the potential impact of these vibration
11 waves even if the shot is at an elevation higher than
12 the lines or the sewage treatment plant?

13 A. I don't think I totally understand your
14 question.

15 Q. Okay. I'm sorry. If there are karst
16 structures, voids and waterways and things like that
17 in the rock and karst features, would that also
18 impact how the vibrations are going -- might be
19 transmitted through the rock?

20 A. Yes, it would.

21 Q. All right. So would --

22 A. Yes, it would.

23 Q. Would that be something else that might
24 impact the potential vibrations on the lines or the
25 sewage treatment plant even if the blasts are at a

1 different elevation?

2 A. The karst topography, in my opinion, would
3 lessen the effect on the lines, but it will greatly
4 impact a lot of other even more serious issues in the
5 long-term environmental health and safety of the
6 site.

7 Q. Okay.

8 A. The surrounding.

9 Q. All right. We'll talk about that in a bit.
10 The last point on the sewage treatment plant that you
11 have is "Reports do not address protecting other
12 sensitive features of the sewer treatment plant," and
13 you mention the UV equipment and the slues valves.
14 Can you tell Mr. Tichenor what you mean by that?

15 A. Yes. There's several older valves that have
16 to be turned. I mean, a sewage treatment plant is
17 really a pretty basic operation, and there's a valve,
18 there's valves that have rubber gasketing on them
19 that have to be turned, and it's a rather rough
20 environment. And there was no information put that
21 anything would be inspected or looked at like a
22 post-construction survey or the blasting plan amended
23 to better protect the line concerning what was going
24 on there. So it was pretty much ignored in terms of
25 safety issues on what's in there, what's working and

1 what happens.

2 Q. Let me move to the considerations, Page 4 of
3 your report. The first consideration you've
4 identified is "Pipe construction and installation,
5 anticipated loads, bedding materials, compaction."
6 Can you explain to Mr. Tichenor the importance of
7 those considerations in evaluating the potential
8 impact on the sewage treatment lines?

9 A. If you don't know the items that he just
10 listed and address them and look at them and the
11 bedding materials, compaction, this has been in the
12 ground for quite awhile, and I would expect if
13 there's a -- the lines are opened up that there will
14 be some areas that the bedding isn't any longer in
15 contact with the pipe. And where that occurs, the
16 pipe is weaker at that area because of the bedding
17 that was supporting the pipe up because it's got a
18 big soil load on top of it, plus the weight of the
19 pipe and what it's carrying, and you've got to know
20 those things because that, again, dictates how much
21 vibration impact the lines can receive without
22 failure. And that hasn't been done. You don't know
23 what you're talking about.

24 Q. The next consideration you've identified is
25 "Fatigue fracture." Can you explain to Mr. Tichenor,

1 what is fatigue fracture?

2 A. Do you have a wood pencil that I could use?

3 Q. I do.

4 A. Fatigue fracture refers primarily to metals;
5 steel, ductile iron. And it means that you have
6 repeated vibrations -- and this applies to all kinds
7 of metal failures. If you have repeated vibrations,
8 nothing much happens, but at that point where it's
9 weakening, it begins to what's called fatigue. And
10 then fatigue happens a little more, and then finally
11 a crack develops and it breaks. And it's strictly
12 because of repeated cycling of the vibration impacts.
13 And so the more you do something, the sooner it's
14 going to wear out and fail and break.

15 Q. Yesterday we heard quite a bit of
16 information about construction blasting from Mr.
17 Mirabelli and his experience in blasting in close
18 proximity to structures and existing pipelines. Have
19 you blasted or -- I shouldn't say -- have you
20 designed blasts and supervised blasts in close
21 proximity to structures and existing pipelines?

22 A. Yes, I have.

23 Q. Are you here today to try to tell Mr.
24 Tichenor that you can't blast in close proximity to
25 pipelines or existing structures?

1 A. Well, there's blasting and there's careful
2 controlled blasting, and so that could be added in
3 there a little bit. No, I'm not telling you you
4 can't blast close to them. It can be -- can be
5 accomplished, but it has to be done carefully and
6 with much forethought in consideration to all the
7 things that could happen and recognize the risks that
8 are there. Because they're all -- every site is
9 different.

10 Q. Have you been involved -- well, let me just
11 cut to this: Can you describe for Mr. Tichenor the
12 difference between construction blasting, this
13 careful, controlled blasting you just mentioned, and
14 blasting that goes on in a rock quarry? I think you
15 told me that's called production blasting.

16 A. Yes. There's a big difference between
17 quarry production blasting and construction blasting,
18 because in construction blasting usually there's all
19 kinds of controls and external things that have to be
20 done, pre-blast surveys and -- I don't know if you're
21 familiar with all that, but there's a lot of work
22 that has to go on. Plus, it is very -- the blasts
23 are smaller in initiation, the blasts are more --
24 they're initiated differently to reduce vibration.
25 And the whole thrust of the construction blasting is

1 to do it without causing damage.

2 Quarry blasting, on the other hand,
3 normally is not in that close of association with
4 sensitive structures like people, transmission lines,
5 gas lines, sewage lines, and it's very large blasts
6 explosives-wise which takes out large sections of the
7 face of the quarry and it's done without a lot of the
8 other safety precautions that normally would occur to
9 protect things in a construction area, because
10 there's things in a construction blasting that have
11 to be protected. And in construction blasting we've
12 seen the change with contractors where there is
13 nothing around and they're doing blasting, they start
14 doing it like you do it in a quarry, big blasts and
15 things are flying everywhere. And that's the
16 difference.

17 Q. Mr. Dressler, I want to ask you a couple of
18 things before I switch slides. Yesterday Mr.
19 Mirabelli told us about blasting, and he compared it
20 to hitting a hammer on this table, that the
21 construction blast was -- if you hit it hard enough,
22 he could make the things jump, but it wouldn't
23 actually, you know, damage the formica. Now, in
24 construction blasting, is it usually multiple shots
25 where you have to blast after blast after blast, or

1 is it one shot?

2 A. No. It's multiple shots. And it looks --
3 when it goes off, like, for trench line blasting for
4 sewers, it looks almost like a big mole is going
5 along because the shots -- and if it's close enough,
6 the shots are multiple. There would be, like, three
7 delays in the explosive column that is just one hole.
8 And so it's a -- there's a very high frequency on the
9 multiple blasts.

10 Q. And he also told us about block movement.
11 And if this pencil is the pipeline, would the block
12 movement, as I understood it, be the concern for the
13 construction blasting is if the blast is close enough
14 and powerful enough, that it would actually cause the
15 pipeline to push a rock into it and break the line
16 right then?

17 A. Yes. Push a rock or a large section of
18 heavily compacted earth, yes.

19 Q. Okay. Now, I want to make sure I'm clear.
20 The fatigue factor that you've talked about, that's
21 not the block movement where it breaks just as a
22 result of one blast; is that right?

23 A. That's exactly right. It takes a very high
24 level of repeated flexures and impacts.

25 Q. Okay. You mentioned a piece of metal, so

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<p>1 I'm going to straighten out this paper clip, and if I 2 got your understanding right, if I try to -- one time 3 I can bend it and it doesn't break; is that right? 4 A. Yes. 5 Q. And if I was to flex it back and forth and 6 flex it back and forth and flex it back and forth, 7 eventually it will break? 8 A. Yes, it will. 9 Q. And is that the fatigue -- 10 A. Notice at the fraction point how it's 11 getting a little hotter, too? 12 Q. Yes. I had to move my finger. 13 A. That's the fatigue factor, what causes it 14 and how it works. 15 Q. And this construction blasting -- there we 16 go. I just got it. Is that the concern that you 17 have about these sewage treatment lines? 18 A. Yeah. Yes, it is, because those lines are 19 going to be in place subject to every blast that goes 20 on for the some 200 acres, and much of the report was 21 just listed for a very small item at the entrance to 22 forming the face of the blast. So it's going to 23 occur for a long time. 24 Q. Another thing about the -- 25 A. The lines are going to be there forever.</p>	<p>1 A. Much of the vibration is focused at the 2 joint or what's called a sheer plane, and it will 3 focus itself. And once the vibrations occur long 4 enough, the glue that's holding them together will 5 break down its little chemical bond that's in there 6 between the sleeve that's on the outside and the 7 piece of pipe that's on the inside. 8 Q. And eventually, then, as that glue breaks 9 down, does that cause the joint to weaken and 10 potentially separate? 11 A. Yes. 12 Q. Is there an additional complication by 13 that -- on that joint, given that the lines are high 14 pressure lines? 15 A. Well, yes, because -- 16 Q. Could you explain that to Mr. Tichenor? 17 A. Yes. It's called hoop stresses. When it's 18 under high pressure... At the same time, I'm not 19 drawing all the arrows, but there's a radial stress 20 that occurs and actually makes the pipe bigger, 21 believe it or not, but it makes it bigger because of 22 the pressure that's on the inside. 23 MR. MAUER: And for the record, 24 Mr. Dressler has drawn the depiction of the hoop 25 stress on the back.</p>
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<p>1 Q. Okay. Another thing about these sewage 2 treatment lines. How long a section is that line? 3 Do you know? Each piece of pipe? 4 A. Oh. Well, it varies with the ductile iron, 5 they're shorter sections. I believe they're 4 foot. 6 And with the PVC, they come in 20 foot because 7 they're just glued together. 8 Q. All right. And those 20-foot sections, for 9 example, where they're put together, will that pipe 10 all experience the same vibration at the same time so 11 that the entire length of the pipe will move in 12 unison? 13 A. No, because the pipe's really long and the 14 vibration levels are going to come out fairly 15 localized, and so sections of it will move 16 differentially from the other. 17 Q. And you mentioned the pipe, the PVC pipe, 18 being glued. If I can use my pen cap there, is there 19 a concern with how that flexure movement would impact 20 the pipe beyond just causing the pipe itself to 21 break? 22 A. Yes, because PVC doesn't just break that 23 easily because it's very flexible. 24 Q. But what happens to the joint through the 25 flexion?</p>	<p>1 Q. (By Mr. Mauer) Is that on the back of BP-55? 2 A. Yes, it is. 3 Q. Thank you. 4 MR. MAUER: Mr. Tichenor, I'm going 5 to move on to a different slide, not a different 6 area. We've been going about an hour and a half. I 7 don't know what your pleasure is, but we've been 8 taking a break about this time. 9 HEARING OFFICER: I was going to say, 10 we're getting ready to move to the next slide? 11 MR. MAUER: Yes. 12 HEARING OFFICER: Let's take about a 13 ten-minute break and try to be back at ten 'til. 14 With that, we're off the record. 15 (Brief recess.) 16 HEARING OFFICER: The hearing will 17 come to order. Mr. Mauer, you may proceed. 18 MR. MAUER: Thank you, Mr. Tichenor. 19 Q. (By Mr. Mauer) Mr. Dressler, I have moved 20 to the fifth slide of your report which is labeled 21 "Worsey McDonald Blast Plan Safety Features." I just 22 want to run through those. In your review of the 23 proposed blast plan, did you see the proposed 24 150-foot set-back? 25 A. Yes, I did.</p>

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<p>1 Q. And the quarry floor above the grade of the 2 pipe?</p> <p>3 A. Yes.</p> <p>4 Q. And you've labeled both of those as 5 voluntary 150-foot set-back. What do you mean by 6 voluntary? Why is that significant to you?</p> <p>7 A. That shows what was being done without a 8 regulation or a law to require it.</p> <p>9 Q. Are you familiar with any sort of 10 enforcement or governmental agency that's going to 11 check up and make sure that the voluntary 150-foot 12 set-back is actually honored? Is there anybody to 13 actually check and see?</p> <p>14 A. No. No one will do that once a permit is 15 given that will check that, give any kind of 16 oversight or have control.</p> <p>17 Q. All right. The same for the quarry floor 18 above the grade pipe. Is there any sort of 19 regulatory authority that follows up to measure and 20 make sure that the quarry floor doesn't go below the 21 elevation of the pipe?</p> <p>22 A. That's correct.</p> <p>23 Q. There is no such supervision; is that right?</p> <p>24 A. Only if there's a complaint.</p> <p>25 Q. Okay. And the similar -- same thing for the</p>	<p>1 ground displacement and vibration that are occurring 2 to the pipes in the facility.</p> <p>3 Q. Will the voluntary 150-foot set-back or the 4 quarry floor, for example, will those things make 5 sure that there is no ground displacement around the 6 pipes or the sewage treatment plant?</p> <p>7 A. No, they won't.</p> <p>8 Q. All right. Then let's talk about some of 9 those things. The 150-foot set-back, your first 10 bullet point identifies it as voluntary, unregulated, 11 unspecified, unenforceable. Have you already told us 12 what you mean by that?</p> <p>13 A. I think so.</p> <p>14 Q. All right. And then "150 feet, Out of thin 15 air," what do you mean by that?</p> <p>16 A. The 150 feet, there seemed to be no 17 engineering or blasting way that that came about. It 18 just appeared that it came out of nowhere, and for 19 what reason I don't know.</p> <p>20 Q. Okay.</p> <p>21 A. You couldn't tell what was promoting it.</p> <p>22 Q. All right. The next bullet point, "Exceeds 23 safe recommendation under Missouri law." What do you 24 mean by that?</p> <p>25 A. Well, by exceeds safe recommendation, the</p>
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<p>1 rotation of the bench closest to the lines. That's 2 the shot where they intend to switch it and then 3 proceed parallel to the lines. Is there any 4 enforcement or supervision to make sure that that 5 proposal is actually done?</p> <p>6 A. No, sir.</p> <p>7 Q. Tell me about, then, the supervision that 8 would occur. Is there any supervision -- well, let 9 me ask it this way: Does the blast plan actually go 10 to anybody in this situation? Is it given to anybody 11 to be checked off, supervised, monitored?</p> <p>12 A. No, it's not. And that's rather 13 discontinuity that there's no oversight or reporting 14 outside of the quarry.</p> <p>15 Q. The blast plan that we looked at before that 16 you talked about doing in Kansas City, now, are those 17 actually required by the City of Kansas City?</p> <p>18 A. Some of it was, given J.E. Dunn's, and they 19 had additional ones, but some of it was required by 20 the City of KCMO.</p> <p>21 Q. The next thing you've got under the Safety 22 Features is "Intended Results." Can you describe for 23 Mr. Tichenor the significance of the intended results 24 that you've identified there?</p> <p>25 A. Well, the intended results is to reduce the</p>	<p>1 regulation -- there is an issue of is this a 2 structure or isn't it. I think it's a structure, and 3 that's how I looked at it, is that this does not come 4 up to the safe distance where you wouldn't have to 5 use a seismograph according to the Missouri 6 regulation.</p> <p>7 Q. And so we're clear on that point, you're 8 using that use of a seismograph test because at that 9 point that means that there will be no vibrations to 10 the pipeline, right? Is that the implication, that 11 if we stay far enough away that you don't have to use 12 a seismograph, then there wouldn't be anything there 13 to register on a seismograph?</p> <p>14 A. Yes. That's the point I was trying to make, 15 yes.</p> <p>16 Q. And if there's nothing registering on the 17 seismograph, does that mean there's being no 18 vibration experienced by the pipes?</p> <p>19 A. Essentially, yes. Yes.</p> <p>20 Q. And is that how you get to your zero 21 tolerance standard?</p> <p>22 A. Yes. Because that's what the pipelines can 23 accept and handle with no danger of a failure from 24 blasting vibrations is zero.</p> <p>25 Q. And is that the point of your -- the last</p>

1 two bullets about "The set-back is designed to reduce
2 the vibration, but they'll still experience ground
3 vibration and chance of displacement"?

4 A. Yes, sir, it is.

5 Q. The next slide talks about blasting above
6 grade, and you've got -- the second bullet point
7 there is "Ground displacement can happen on different
8 planes." Can you explain what you mean by that to
9 Mr. Tichenor, please.

10 A. Ground displacement is strictly a block of
11 rock or soil that comes out in a consolidated mass to
12 impact the lines, and that can occur on whatever
13 plane that you're in when it's going -- when the
14 shots are, you know, 50-foot deep.

15 Q. So even though it's above grade, there still
16 is the possibility of block movement and ground
17 displacement into the lines?

18 A. Yes, there is.

19 Q. Your next safety feature is "Relief
20 Structures." Can you explain to Mr. Tichenor what
21 you mean by the relief structures?

22 A. The relief structures are -- is the face of
23 the quarry that has no quarry around it or is open.
24 And the relief structure is good because blasting
25 done that way, much of the vibration will go out into

1 the air and be dissipated and so it's called an open
2 face or relief structure. And it's a good thing to
3 do, but it needs to be done because it's a safer way
4 of doing quarry blasting to protect things that are
5 in its path of vibration.

6 Q. And in the past when you have designed
7 blasts next to buildings and pipelines, have you
8 actually designed a safety feature where you do a --
9 and I forgot the name -- a cut, a very deep trench,
10 right next to the structure you're trying to protect?

11 A. Yes. It's done also in highway
12 construction, a pre-split face. And it creates a
13 sheer plane. A very small discontinuity of maybe an
14 eighth of an inch crack is formed by using pre-split
15 technology with explosives to form a sheer face,
16 because when the vibrations are coming out from the
17 blasting, the big blasts, there's a significant
18 lessening of vibrations past that sheer face.

19 Q. And just so I'm clear, let me see if I can
20 make sure that we're all understanding. If we had a
21 giant forest, I've seen in Colorado and other places
22 where they cut a firewall, where they just go right
23 through and cut a firewall through the forest so that
24 the flames don't have the easy access to jump across
25 and keep the forest burning.

1 A. Same thing in principle, except it's bigger.

2 Q. So the idea here is you would actually
3 design for this -- and I'm sorry. What did you call
4 it again?

5 A. A sheer plane. It's a discontinuity in the
6 rock so that it can't transmit vibration across that.

7 Q. And did the blasting plan include any sort
8 of consideration of a pre-split or a sheer plane
9 along the sewer lines or adjacent to the sewage
10 treatment plant?

11 A. None was mentioned or shown.

12 Q. The next safety feature that's discussed is
13 the rotation of the last bench, and again, the second
14 position, second point you've got there, is that "It
15 was proposed by Magruder quarry to protect the lines.
16 Why not do this with every blast?" What do you mean
17 by that?

18 A. It seems like a very good idea. I would
19 assume Dr. Worsey came up with it. And it means it
20 seems a better way, why not do that to start with. I
21 don't know why it was -- the rotation of the blasting
22 rather than going away was turned, but it seemed like
23 to me a better way of doing it, and I don't know why
24 it wasn't done at the very front, to start with.

25 Q. And Page 10 identifies Safety Feature Number

1 5, Monitoring Stations. And the second bullet point
2 you've got there is "Monitoring stations won't
3 prevent damage." Can you explain to Mr. Tichenor
4 what you mean by that?

5 A. All a monitoring station does is record
6 what's happened after it's happened, and unless
7 something is done with the readings each time they
8 occur and you can count on it, something being done
9 corrective or changing, a monitoring station doesn't
10 do you any good unless there's an action plan or
11 something that's going to happen if things go wrong.

12 Q. Your next bullet point is "Monitoring
13 stations won't reduce environmental impact of break."
14 Can you explain that?

15 A. Yes. I'll try. The environmental impact
16 that's at the site is once you break through karst
17 topography, once you start breaking rock, there's
18 noise, there's dust, and there will be water well
19 reduction, drawdown, because of a hole being put into
20 the water ground source that serves the whole Lake of
21 the Ozarks. And so well quality and well depth will
22 all be -- well depth will be increased that's
23 required to get water at the Lake of the Ozarks. And
24 then water quality from the blasting interference
25 into the karst topography, ground water source,

1 because that's where all the water here at the lake
2 comes from for anybody that's on a well. And we're
3 on a well.

4 Q. Mr. Dressler, one other thing. If you've
5 got a monitoring station sitting adjacent to the
6 pipelines and the pipelines rupture, is that
7 monitoring seismograph going to do anything to stop
8 that sewage from running into the lake or the Osage
9 River?

10 A. No, it won't.

11 Q. Now, I want to talk to you about that,
12 because I thought of an example as I was driving this
13 morning. Coming through, I think it was Tipton,
14 right by the speed limit sign of 45 miles an hour
15 there was one of those speed clocks that told me how
16 fast I was going at the moment. Is that kind of like
17 a seismograph, because that clock told me what I was
18 doing, but does the seismograph do anything to slow
19 down the vibrations, just like that speed check radar
20 does anything to slow down my car?

21 A. That's a very good analogy, and that's one
22 of the problems with seismographs is they don't have
23 you -- it gives you what you've done, but it doesn't
24 tell you that you better slow down, or it doesn't
25 have you take any kind of action.

1 Q. And two things with that. So the
2 seismograph itself isn't actually going to slow down
3 my car. I'm going to have to decide I'm going to
4 slow down and meet the speed limit, right?

5 A. Right. It's called responsible response.

6 Q. Okay. And one other thing. Even if I would
7 slow down to 45 miles an hour, does that guarantee,
8 then, that there's no possibility that I could get in
9 an accident as I'm going through town?

10 A. No, it doesn't.

11 Q. So just because the seismograph reads within
12 some sort of limit set by State law, does that mean
13 that there can't be an adverse impact on the pipe or
14 the sewage treatment plant?

15 A. No, it doesn't.

16 Q. Now, the last bullet point you've got is --
17 or the second to the last is "Already trying to avoid
18 monitoring stations by not including lines as
19 structures." What do you mean by that?

20 A. Well, by ignoring the lines that transverse
21 through the very heart or middle of the quarries,
22 it's ignoring one of the most critical things that
23 should be handled. And by not putting monitoring
24 stations on it, you're just -- I mean, it's another
25 way of saying, I don't care.

1 Q. Mr. Dressler, if Mr. McDonald says, well,
2 we'll put a monitoring station on the lines, or if
3 Mr. Henderson says, should Dyno Nobel be chosen to do
4 the blasting, we'd put a monitoring station on the
5 lines, is that just another voluntary thing, then,
6 that Magruder is telling the Commission that they
7 would implement?

8 A. Yes, it is. It's another voluntary,
9 unsupervised, no oversight, no outside communication,
10 if it's really going to happen or occur.

11 Q. And the last point you have is "Analyzed by
12 a company hired and paid by Magruder." Why is that
13 significant, for the monitoring stations and the
14 monitoring reports?

15 A. That gives -- the information source is
16 closed and it's dedicated on keeping your job.

17 Q. Now, with respect to these safety features
18 identified by the Magruder plan, is there a
19 concern -- do you have a concern about the ability of
20 the Magruder personnel and the Magruder company to
21 actually carry through and accomplish all of these
22 requirements as set forth in the plan?

23 A. Yes, I do, very much.

24 Q. When you prepare a blast plan and work with
25 a company, do you evaluate the ability of the company

1 to be able to follow through with the plan that
2 you've developed?

3 A. Yes, we do. And if they're -- and when you
4 do run into people that don't, you don't work for
5 them.

6 Q. Okay. And in the insurance investigations
7 that you mentioned earlier, would part of your
8 insurance investigation be to go back and look at the
9 actual blast records of the company and to try and
10 decide did the company follow all safety protocol?

11 A. Yes, sir, it sure is. Absolutely.

12 Q. Have you reviewed information -- let me show
13 you BP-27, 28, 29, 30, 31 and 32.

14 MR. BROWNE: Your Honor, I'm going
15 to object to those again. This is again the MSHA
16 stuff we've had now presented about four different
17 times that you've already ruled on.

18 MR. MAUER: I understand, your Honor.
19 First of all --

20 HEARING OFFICER: They're excluded
21 from evidence; therefore, I can't have a witness
22 testifying about them.

23 MR. MAUER: Okay. Can I continue my
24 offer of proof from yesterday for the purposes of
25 this witness?

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<p>1 HEARING OFFICER: You can state what 2 you would expect this witness to testify to. 3 MR. MAUER: Sure. This witness would 4 testify that based upon his training and experience, 5 to properly evaluate a blast plan, you would have to 6 know the ability for the plan to be implemented and 7 carried through, just as Mr. Mirabelli and 8 Mr. Henderson agreed that the actual carry-out of the 9 plan is as important as the design of the plan 10 itself. Based on this information and other 11 information, Mr. Dressler would offer his opinion 12 about the ability of the plan to be implemented by 13 Magruder. If they can't follow through to, you know, 14 require their employees to wear a hard hat or put a 15 lid on a trash can or sound the warning horn before 16 they blast, there is -- he has concerns about their 17 ability to follow through with all of these 18 requirements of this plan. 19 HEARING OFFICER: The Hearing Officer 20 understands your offer of proof. The objection is 21 still sustained. The exhibits cannot come in, 22 neither can testimony from this witness regarding 23 those exhibits. 24 Q. (By Mr. Mauer) Mr. Dressler, have you 25 received notices of violations and received</p>	<p>1 there is erosion run-off into the lake? 2 A. Yes, I am. That's in our neighborhood. I 3 live there. I know that. 4 Q. So you're aware of that situation involving 5 the Magruder Limestone Company? 6 A. Yes, sir. 7 Q. And does that violation give you concern 8 about the ability of the Magruder company -- 9 HEARING OFFICER: Is there an 10 objection. 11 MR. BROWNLEE: Your Honor, there's no 12 violation that's been issued at the Sunrise Beach 13 Quarry. This is just an absolute misrepresentation 14 of fact. 15 HEARING OFFICER: I have no evidence 16 in the record that there's a notice of violation 17 regarding this, Mr. Mauer. 18 MR. MCGOVERN: Just briefly, your 19 Honor, to respond to that, Mr. Tichenor, if I may. 20 HEARING OFFICER: Mr. McGovern. 21 MR. MCGOVERN: I believe the 22 regulation speaks of instances of non-compliance. It 23 doesn't speak of instances of notices of violation, 24 as you find in other parts of the DNR regulations, 25 such as the habitual violator rule, as well as some</p>
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<p>1 information about how the Magruder company operates 2 its other quarries? 3 A. I thought I was not supposed to answer 4 things like that. 5 Q. This is beyond -- 6 A. Oh, is this new? Yes. Well, I have, yes, 7 sir. 8 HEARING OFFICER: Let's make sure the 9 witness is clear on what you're asking, Mr. Mauer. 10 The question cannot be about that stack of reports. 11 It has to do with notices of violation with the 12 Department of Natural Resources. 13 Q. (By Mr. Mauer) For example, are you aware 14 of a situation involved -- 15 MR. BROWNLEE: Your Honor, he's 16 leading the witness. Are you aware of some 17 situation. He can ask the witness what he's done, 18 but he can't lead a witness on this issue. 19 HEARING OFFICER: No. He can ask him 20 if he's aware of a given situation. The objection is 21 overruled. Is he aware of a situation? Describe the 22 situation. 23 MR. MAUER: Sure. 24 Q. (By Mr. Mauer) Mr. Dressler, are you aware 25 of a situation out at the Sunrise Beach Quarry where</p>	<p>1 of the application process. So I would only respond 2 to that from the standpoint of I think the 3 regulations that we are working under talk about 4 non-compliance. 5 MR. BROWNLEE: Just to supplement 6 factually, I think the evidence is that if there's 7 any problem with erosion, it occurred with the prior 8 owner. I mean... 9 MR. MAUER: Actually, I think the 10 testimony was, your Honor, from the Sunrise Beach 11 witnesses and perhaps even the Land Rec Program folks 12 themselves that the erosion has continued and that 13 the promises to clean it up have not been fulfilled. 14 I believe that's what the record would show. I'll 15 let the record speak for itself, but that's my 16 memory. 17 MR. MCGOVERN: Mr. Tichenor, I was 18 looking at 444.773, and within there there's language 19 down in Section 4 that talks about -- this is the 20 hearing -- in determining whether a reasonable 21 likelihood of non-compliance will exist in the 22 future, the Commission may look to past acts of 23 non-compliance. 24 HEARING OFFICER: I still don't have 25 a foundation that this is a non-compliance under...</p>

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<p>1 I don't have any sort of report with DNR which cites 2 Magruder for non-compliance about the incident you're 3 talking about, Mr. Mauer and Mr. McGovern. I know we 4 had some witnesses testify as to what occurred out 5 there. That doesn't rise to establishing 6 non-compliance with the regulations under which the 7 quarry operates as far as the Department of Natural 8 Resources, and so therefore, even though this witness 9 may be aware of what he purports to be run-off from 10 the quarry, that doesn't establish it as 11 non-compliance under the regulations that are 12 controlling for this hearing. 13 MR. MCGOVERN: Again I would make the 14 distinction between non-compliance and actual notices 15 of violation which is -- 16 HEARING OFFICER: I'm talking about 17 non-compliance. That's what I said, Mr. McGovern. 18 MR. MCGOVERN: I understand, but the 19 regulations certainly do state that you cannot have 20 particulate emissions travelling beyond the property 21 boundary, which certainly would include run-off 22 sediment that would go into the lake. If, in fact, 23 that has happened. It is my -- 24 HEARING OFFICER: If, in fact, that 25 has happened. I don't have -- I don't have a report</p>	<p>1 level of scientific evidence of non-compliance, and I 2 think I'm bound by that standard. 3 Q. (By Mr. Mauer) Let me try it this way, 4 Mr. Dressler: In your preparation of blast plans, 5 would you evaluate the ability of a company to 6 implement the plan as you've designed it? 7 A. Yes, I would. 8 Q. And would part of that analysis be -- would 9 you be able to conclude if a company would be capable 10 of implementing your blast plan if you didn't know 11 the -- for example, the procedures utilized by the 12 company to maintain blast reports on site to make 13 sure that when the blaster arrives they have the 14 information available to the blaster to know what the 15 prior impact of blasting has been? 16 A. Absolutely, yes. You look for those kind of 17 things because that proves what their capabilities 18 are. And, like what he's talking about, the blasting 19 record oftentimes you look as done on clean paper, 20 and if it's done on clean paper, it wasn't done on 21 the site like it was supposed to have been done. And 22 so it's things that you look for to ensure that 23 they're following what they're supposed to be 24 following. 25 Q. Would you be able to make a determination on</p>
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<p>1 of a non-compliance to the Department regarding this. 2 MR. MCGOVERN: I understand. Okay. 3 HEARING OFFICER: And that's what I'm 4 talking about. I'm talking about the rule and 5 regulation, and I think it has to be read in that 6 light. I may be as wrong as can be on it, but I've 7 looked at it rather extensively. 8 MR. MCGOVERN: And just to complete, 9 then, the record on that issue, and I'll have nothing 10 further. 11 HEARING OFFICER: Sure. 12 MR. MCGOVERN: I don't think the 13 regulations as written require that there be a 14 written report, or for that matter an inspection 15 report, identifying specific non-compliance. It's 16 much broader than that, is my position, and a witness 17 could testify, as some of them have in this case, 18 about issues of non-compliance, because we certainly 19 know from the testimony, DNR at its best may only get 20 out for inspections once every three years. So with 21 that, that's my response. 22 HEARING OFFICER: I understand that. 23 I simply am not persuaded that the testimony of the 24 other witnesses or any testimony of this witness 25 might give about run-off, et cetera, rises to the</p>	<p>1 the ability of the company to satisfy the 2 requirements of a blast plan without knowing if they 3 even transmit the seismograph readings to the actual 4 quarry site so that the seismograph readings are 5 available to the blaster before implementing the next 6 blast? 7 MR. BROWNLEE: Your Honor, I'm going 8 to object to this whole line of questioning. He's 9 asking just these hypothetical general questions, and 10 they're not in any way focused on this witness' 11 knowledge of what Magruder has done in the past. I 12 mean, we've just gone on for 25 minutes here over 13 Mr. Mauer's belief and the hypotheticals that are not 14 tied to this application. 15 HEARING OFFICER: Mr. Mauer, do 16 you -- 17 MR. BROWNLEE: I mean, it's just 18 irrelevant. 19 HEARING OFFICER: All right. Do you 20 wish to respond to the objection? 21 MR. MAUER: Yes, your Honor. I think 22 it's very clear that the critical point of 23 Mr. Dressler's opinions is the incomplete nature of 24 this blast plan. And one of the things that we 25 pointed out with Dr. Worsey and with Mr. Mirabelli</p>

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<p>1 and Mr. Henderson is they have no idea about the 2 qualifications of Magruder or the capability of the 3 Magruder company to actually follow the plan and 4 implement the plan. And one of the things that Dr. 5 Worsey specifically identified is that he had no idea 6 and Mr. Mirabelli and Mr. Henderson said even if the 7 plan results and the seismograph reports are sent to 8 the company, they don't know if they're actually on 9 site at the quarry. They don't even know that 10 information. And for them to be able to determine -- 11 or for this witness to be able to determine if 12 Magruder is capable of implementing the plan, those 13 would be things he would have to look at, which this 14 goes to the incomplete nature of this proposed blast 15 plan and this application.</p> <p>16 HEARING OFFICER: I understand all 17 that you've said. I have no foundation in this 18 record that Magruder has failed to maintain blast 19 records at any of its sites. I do not recall a 20 single iota of testimony that relates to that. So 21 your hypothetical question is based upon a foundation 22 that is not facts in evidence, and it does nothing, 23 then, to advance the inquiry of the Hearing Officer 24 and of the Commission. It is taking a hypothetical 25 which says, if this were the case, and it hasn't tied</p>	<p>1 of the pipe is irrelevant -- around the pipes is 2 irrelevant, would you agree or disagree with that 3 testimony?</p> <p>4 A. I would disagree.</p> <p>5 Q. And why is that?</p> <p>6 A. That's because the bedding of the material 7 is what -- and how it's done and what's really there, 8 if there's voids underneath it or what all, is 9 extremely important because that's what's supporting 10 the pipe, and that support is critical to it not 11 failing.</p> <p>12 Q. The next point you've got is "Magruder 13 expert reports are misleading with their language and 14 authored by blasters with obvious bias." Is there 15 particular language in those reports from Mr. 16 Mirabelli and Mr. Henderson that you believe is 17 misleading?</p> <p>18 A. Yes, sir, there is.</p> <p>19 Q. And what would that be?</p> <p>20 A. It helps sell the explosives which they are 21 doing.</p> <p>22 Q. When the Magruder -- when Mr. Mirabelli and 23 Mr. Henderson's reports talk about ensure the 24 pipelines, does that suggest that there's going to be 25 no potential risk? Is that some of the language that</p>
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<p>1 it that Magruder fits that case, and therefore the 2 objection is sustained. It is not relevant without 3 that foundation.</p> <p>4 Q. (By Mr. Mauer) The first bullet point on 5 Slide 11 is -- it says, "Magruder's expert reports 6 are contradictory regarding vibration on pipes." Can 7 you explain what you mean by that to Mr. Tichenor?</p> <p>8 A. Yes. Yes, I can. The reports that are used 9 and accepted, which I am one, are on high-strength 10 steel welded special gas transmission lines, and the 11 regulations are contradictory when you try to apply 12 that to DI, ductile iron, or plastic pipe. And 13 that's what I mean by contradictory, because it's a 14 mix and match. They're not the same thing. All 15 pipes are not created equal.</p> <p>16 Q. If Mr. Henderson testified that he doesn't 17 give a crap what kind of pipes are actually in the 18 ground because they're irrelevant, would you agree or 19 disagree with that?</p> <p>20 A. I'd have -- I would have to vociferously 21 disagree, because we see what we know, and either he 22 is ignorant or he doesn't know any better, but that 23 isn't the kind of statement to make.</p> <p>24 Q. Mr. Dressler, if the testimony from 25 Magruder's experts were that the backfill and bedding</p>	<p>1 you have concerns about being misleading?</p> <p>2 A. Yes, because that isn't what is being shown 3 or conveyed or communicated.</p> <p>4 Q. And then your third bullet point is 5 "Magruder expert reports do not address fracture 6 fatigue"?</p> <p>7 A. Yes.</p> <p>8 Q. And what do you mean by that?</p> <p>9 A. Well, that's been explained briefly before, 10 and it means repeated blasting, which quarry blasting 11 is, dissimilar to construction blasting, is that 12 there's a fatigue failure that can occur because of 13 the repeated vibration motions that will occur. And 14 it's going to last 20 to 30 years. A lot of blasts.</p> <p>15 Q. And the last point, "Magruder expert reports 16 do not address karst topography or other 17 environmental impacts." Have you told us about the 18 concerns you have with the Magruder reports on those 19 issues?</p> <p>20 A. Yes. I think so.</p> <p>21 Q. All right. Now, the next slide, 12, says, 22 "Issues, Vibration." Your first bullet is "It only 23 reduces vibration." Can you explain to me what you 24 mean by that?</p> <p>25 A. Well, what has been proposed will reduce the</p>

1 vibration, but what is being the criterion is it
2 should be no vibration, zero vibration, is what the
3 lines can handle. Reducing it is no big deal, it's
4 easy to do, but you have to get it at zero.

5 Q. And then your next point talks about the
6 contradiction between -- your belief that there's a
7 contradiction between Mr. Henderson and Mr. Mirabelli
8 regarding their peak particle velocity calculations?

9 A. Yes, I do.

10 Q. Can you explain that to Mr. Tichenor?

11 A. Well, that's a very high inches-per-second
12 vibration, and since they don't know what the
13 vibration levels are, it is a misnomer, a
14 non-sequitur. It's meaningless. Because even though
15 it's 4.92, that was for a high-strength steel welded
16 gas transmission line. It wasn't for ductile iron.

17 Q. All right. Now, your last bullet point
18 says, "Vibration may increase in unsupported areas of
19 the pipe." Have you developed an illustration of how
20 the unsupported areas of the pipe could be enhanced
21 as a result of the vibrations?

22 A. Yes, I have.

23 Q. All right. Now, we've got a few slides
24 here, starting on 13. Can you explain to Mr.
25 Tichenor what you're showing here in Slide Number 13?

1 A. Yes. This is a section of ductile iron, and
2 it shows that there may be -- I don't know if they
3 are, but I would fully expect it that in some
4 locations there's going to be voids from differential
5 settlement in the bedding material or missed filling
6 when the lines were installed or a variety of things,
7 that there will be some voids underneath the lines.
8 And those voids create an unsupported piece of the
9 pipe, and where it's unsupported, the stress is
10 increased from the weight of the pipe and the weight
11 of the load, and from -- and it makes it also more
12 susceptible to vibration because that's all that
13 holds that pipe in place. And so it's a problem that
14 the pipes are even weaker than what you can perceive
15 from vibration.

16 Q. And then as we progress through these
17 slides, when we go from 13 to 14, we see the void
18 getting bigger, and to 15 the void is getting bigger,
19 and in 16 the void is getting bigger, and now it's
20 actually on the other side of the joint. Could you
21 explain to Mr. Tichenor how the vibrations would
22 cause that void to get bigger? What is happening
23 with the particles of dirt adjacent to the void that
24 as a result of those vibrations the void is getting
25 bigger?

1 A. Because it's shaking. And if you take a cup
2 of sand or what-all and you shake it, it goes down.
3 And so any vibration that's coming into the bedding
4 surfaces of the lines will cause it to settle more.
5 And some of the voids may be occurring naturally even
6 without vibrations. But when you start putting any
7 kind of vibration in there, it's going to compress
8 more. It enhances the -- increases the voids.

9 Q. And what is the significance of the void
10 when it then, as in Slide 17, when it reaches past
11 the joint so that the joint becomes unsupported?

12 A. I'm sorry. I forgot to tell you one more
13 important point on this. Mr. Tichenor, what the
14 vibrations do to the soil is a lot like when it's
15 compacted, soil is compacted for a road. The
16 vibration in the sheep's foot or the face roller
17 causes better compaction. And that's essentially
18 what's going on. The vibrations increase the
19 compaction, which makes the hole bigger.

20 Q. And just so we're clear, if the vibrations
21 are coming in from the side and they're impacting
22 here, would that cause the particles, then, as I
23 understand it, to flow into and trickle into the void
24 so that the void continues to expand laterally along
25 the line?

1 A. Uh-huh. Yes.

2 Q. And what's the significance when the void
3 gets big enough that it actually spans a joint?

4 A. When it spans a joint? There will be a
5 failure at the joint, because joints can't handle
6 that.

7 Q. And are there -- have you set forth two
8 potential impacts for the vibration settling of the
9 bedding, the first one a joint break?

10 A. Yes.

11 Q. And then the next one is a burst
12 underground. Are you familiar with an occasion where
13 the 18-inch PVC line actually burst, even though it
14 wasn't contacted but there was construction
15 activities that actually reduced the amount of fill
16 around it such that the pressure changed on the pipe
17 and it actually just burst on its own?

18 A. Yes. I heard that. And that does occur
19 when you excavate along a pipe.

20 Q. And would that be the kind of concern that
21 you would have occurring if the burst would occur
22 underground as a result of just the increasing
23 settling changing the fill around the pipeline?

24 A. Yes.

25 Q. All right.

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<p>1 A. It's going to break one of those two ways.</p> <p>2 Q. All right. So the first way, here we have</p> <p>3 the continued settling and then the joint breaks. Is</p> <p>4 that the way you've depicted it on Slide 19?</p> <p>5 A. Yes, it is.</p> <p>6 Q. And, in fact, are you aware of a situation</p> <p>7 where the 18-inch PVC line in an old quarry site</p> <p>8 dipped down and then there was rock piled on top of</p> <p>9 it such that the pipeline just compressed and</p> <p>10 eventually separated?</p> <p>11 A. Yes.</p> <p>12 Q. All right. We've heard testimony about that</p> <p>13 from Mr. King?</p> <p>14 A. Yes.</p> <p>15 Q. So we know that this 18-inch PVC line is</p> <p>16 susceptible to that type of breakage?</p> <p>17 A. Yes, it is.</p> <p>18 Q. All right. And on Slide 20 we show the</p> <p>19 bursting underground. Is that your little depiction</p> <p>20 there of what would happen?</p> <p>21 A. Yes.</p> <p>22 Q. Let's look at Slide 21. Now, before we go,</p> <p>23 let me ask you this: This idea that the line could</p> <p>24 burst or the voids could occur naturally, are those</p> <p>25 things that -- are those already dangers that exist</p>	<p>1 doesn't eliminate it. Eliminate is zero.</p> <p>2 Q. And your next bullet point says, "No</p> <p>3 professional engineers provided expert reports." To</p> <p>4 your knowledge, is Mr. Henderson a licensed</p> <p>5 professional engineer?</p> <p>6 A. No, sir, he isn't.</p> <p>7 Q. And how about Mr. Mirabelli?</p> <p>8 A. No, he isn't either.</p> <p>9 Q. And have you worked with Dr. Worsey before</p> <p>10 on other projects?</p> <p>11 A. Yes, I have.</p> <p>12 Q. Do you know, is Dr. Worsey a licensed</p> <p>13 engineer in the state of Missouri?</p> <p>14 A. Not in the state of Missouri.</p> <p>15 Q. In fact, is he a licensed engineer anywhere</p> <p>16 in the United States?</p> <p>17 A. No, he isn't.</p> <p>18 Q. And the next point is, "None of the reports</p> <p>19 authored by an expert in pipe construction or</p> <p>20 installation." Are you an expert in pipe</p> <p>21 construction and installation?</p> <p>22 A. I think so, yes.</p> <p>23 Q. All right. Have any -- has Mr. Mirabelli,</p> <p>24 Mr. Henderson or Dr. Worsey, to your knowledge, set</p> <p>25 forth any supported expertise in either pipe</p>
Page 99	Page 101
<p>1 for the sewage treatment lines?</p> <p>2 A. They may exist. It wouldn't surprise me if</p> <p>3 there's some of it occurring along. You just don't</p> <p>4 know where.</p> <p>5 Q. And so what's the impact of blasting in the</p> <p>6 vicinity of those lines with respect to that risk?</p> <p>7 If it's already there, what's the impact?</p> <p>8 A. Well, it's already weakened, and you blast</p> <p>9 in that area and create more vibration, it</p> <p>10 accelerates the failure that's going on and</p> <p>11 exacerbates it, another word for it, and failure will</p> <p>12 occur.</p> <p>13 Q. All right. We're closing in on the end.</p> <p>14 Slide 21 talks about the Magruder report, blasting</p> <p>15 report, done by Dr. Worsey and Mr. McDonald. And at</p> <p>16 first you've taken out -- identified the word</p> <p>17 eliminates from that report and you've reported that</p> <p>18 does not mean eliminate, rather means reduced to a</p> <p>19 reasonable degree of engineering certainty. Do you</p> <p>20 see that?</p> <p>21 A. Yes.</p> <p>22 Q. Why is that significant to you?</p> <p>23 A. Because eliminates means zero. It</p> <p>24 doesn't -- it's improper use of the term eliminates,</p> <p>25 because it doesn't eliminate. It reduces it, but it</p>	<p>1 construction or pipe installation?</p> <p>2 A. Nothing that I've been able to read or find</p> <p>3 out except that it's just being fluffed over.</p> <p>4 Q. Okay.</p> <p>5 A. Ignored.</p> <p>6 Q. And your last point is "All reports authored</p> <p>7 by blasters employed in blasting industry who have</p> <p>8 been promised to be retained by Magruder if quarry is</p> <p>9 permitted." What do you mean by that? Why is that</p> <p>10 significant?</p> <p>11 A. That's a fact of how it works and would show</p> <p>12 the propensity to give decisions that makes the</p> <p>13 quarry go. No quarrying, no job.</p> <p>14 Q. Let's look at this issue that you've</p> <p>15 identified as fatigue fracture. We've talked about</p> <p>16 fatigue fracture and you've identified the phenomenon</p> <p>17 of fatigue fracture. Why is it significant to you</p> <p>18 that all of the Magruder experts concede that there</p> <p>19 will be some vibration on the pipes?</p> <p>20 A. Well, because that's a fact, it will, with</p> <p>21 the way they're doing it and the blasts and all that.</p> <p>22 I mean, it would be an outright incorrect statement</p> <p>23 to say otherwise.</p> <p>24 Q. Okay. Now, we've already -- you've already</p> <p>25 demonstrated about the fatigue fracture, and I think</p>

26 (Pages 98 to 101)

1 I already broke the paper clip to show what you mean,
2 but you gave me an example the other day. Can you
3 explain to Mr. Tichenor how fatigue fracture works,
4 for example, in a light bulb?

5 A. Oh. That's a good analogy. On a light
6 bulb, the more you use it, the more that filament
7 flexes, and eventually the flexing of it with the
8 heat and everything, that's another example of a
9 fatigue failure. That's very common, and that's how
10 it works. But it's just based on numbers of cycles,
11 and each product or thing, whether it's a piece of
12 pipe, a car or a light bulb, each has their own life
13 cycle on fatigue failures. Similar, I suppose, to
14 people. We all got it.

15 Q. All right. The next thing you've identified
16 on Page 23 is karst topography. I want to show you
17 what's been marked as BP-8. Do you recognize BP-8?

18 A. I sure do.

19 Q. And what is BP-8?

20 A. BP-8 was put out by the USGS, the U.S.
21 Geological Survey, and I believe MDNR also.

22 Q. And have you relied upon BP-8 in forming
23 part of your opinions regarding the existence of
24 karst topography in and around the Magruder site?

25 A. Yes, sir, I have.

1 Q. And is it your opinion that there is karst
2 topography in and around the Magruder site?

3 A. Yes, sir, there is.

4 MR. MAUER: Your Honor, I'd offer
5 BP-8.

6 HEARING OFFICER: BP-8 has been
7 offered. Any objection?

8 MR. MCGOVERN: No.

9 MR. BROWNLEE: No.

10 HEARING OFFICER: No objection. BP-8
11 is received into evidence.

12 Q. (By Mr. Mauer) Now, in reviewing BP-8, does
13 it identify one of the types of rock particularly
14 susceptible to karst as being dolomite?

15 A. Yes, it does.

16 Q. And do you know what type of rock is being
17 proposed to be quarried by Magruder on this very
18 site?

19 A. Dolomite.

20 Q. All right. Now, karst topography,
21 Mr. Dressler, can you stand on top of the ground,
22 stand on the grass, you know, hold onto a tree and
23 know if there is karst topography beneath your feet,
24 beneath the soil?

25 A. No, sir, you can't. There's no visible

1 signs of it.

2 Q. Okay. Now, what are some of the indicators
3 that there is karst topography in and around the
4 Magruder site? What are some of the things that are
5 indicia of karst-type topography?

6 A. It's consistent with the Lake of the Ozarks
7 that we're familiar with. There's caves around.
8 There's open cuts that you can observe in the lake,
9 along the Osage River, that show karst topography
10 that are covered in this book also, voids. There are
11 sinkholes that have occurred in Gravois Mills.
12 There's springs available, and the springs are a
13 direct outcome of karst topography. I'd say that's
14 about it.

15 Q. Have you done anything to investigate
16 whether or not any of these karst-type features are
17 close or actually evident on the Magruder property or
18 close to the Magruder property?

19 A. Close to the Magruder property.

20 Mr. Atkisson has drilled --

21 MR. BROWNLEE: I'm going to object to
22 that as hearsay.

23 MR. MAUER: Your Honor, he can rely
24 upon hearsay. We've already established that.

25 MR. BROWNLEE: Not from a lay

1 witness.

2 HEARING OFFICER: Not from a lay
3 person he can't.

4 MR. MAUER: He can rely upon the
5 information given to him by Mr. Atkisson as to what
6 Mr. Atkisson experienced on drilling his own well.
7 He's not going to say that Mr. Atkisson said it was
8 karst. He's going to tell about what did
9 Mr. Atkisson report to him and what he experienced
10 when he drilled the well. That he can rely upon to
11 then determine if that's indicative of karst. That
12 he can certainly rely upon, the information reported
13 to him as to --

14 HEARING OFFICER: Mr. Atkisson
15 drilled his own well?

16 MR. MAUER: Mr. Atkisson -- well,
17 he's not here today.

18 HEARING OFFICER: No. Simple
19 question. Did he drill his own well.

20 MR. MAUER: I believe he did.

21 HEARING OFFICER: He's a well
22 driller?

23 MR. MAUER: I believe he was there --

24 HEARING OFFICER: He's a well

25 driller?

1 MR. MAUER: I don't know the answer
2 to that.

3 HEARING OFFICER: Then what we're
4 doing, Mr. Mauer, is we're taking the man who drilled
5 the well, and he reported something to Mr. Atkisson
6 who reported to this witness. So what I've got is
7 I've got hearsay on hearsay. Now, if this witness
8 had actually talked to that well driller, I've been
9 present when wells have been drilled and I've had
10 well drillers tell me about what they're
11 encountering, but that's hearsay on hearsay, unless
12 you're going to establish this witness talked to the
13 man who drilled the well, not to the man who was
14 having the well drilled, the objection is sustained.

15 Q. (By Mr. Mauer) Have you identified sources
16 of information, reports, that show karst topography
17 in and around the Lake Ozark area, besides the USGS
18 report?

19 A. No. That's one of the best that's been
20 produced in this, that I'm aware of.

21 Q. Okay.

22 A. All it takes for karst topography, though,
23 is limestone and water, and it will occur wherever
24 that event goes on.

25 Q. And the karst topography, do you have to

1 have a giant cave like Bridal Cave in order for the
2 topography to be considered karst?

3 A. No. That's just one of the end results of a
4 very old karst that was close to the surface and has
5 finally collapsed. And that occurs towards the
6 ending of the life cycle of the karst that's there.

7 Q. Okay. All right. Now, Slide 24 identifies
8 issues involving karst topography, and your first
9 issue is that "The blast plan by Mr. McDonald and Dr.
10 Worsey ignores the karst topography." Why is that
11 significant to you, Mr. Dressler?

12 A. Well, it's my opinion if they knew there was
13 karst topography it wouldn't be a good site to build
14 a quarry on, because there's a lot of problems if
15 you -- if you handle the problems more than just
16 ignore them that karst topography presents to quarry
17 operations.

18 Q. And your next bullet point is that "All
19 three Magruder experts ignore the karst topography
20 and geology." Why is that significant?

21 A. Well, if you ignore it, you don't have to
22 handle it.

23 Q. And would the blast plan and the quarry
24 operation have to be modified and changed if the
25 karst topography is considered?

1 A. Yes.

2 Q. All right. And then you've talked about the
3 proposed quarry is in a karst area. You've already
4 mentioned the prevalence of caves. Let me show you
5 what's been marked as BP-6. Do you recognize BP-6?

6 A. Yes. I got that from the Missouri
7 Department of Conservation.

8 Q. And what does BP-6 tell you about the karst
9 features in and around the Osage River and Osage
10 Beach?

11 A. That they're there.

12 Q. If you look on Page 2 of BP-6 under the --
13 I'm not going to say that right -- geomorphology?

14 A. You've got it right.

15 Q. G-E-O-M-O-R-P-H-O-L-O-G-Y. The second
16 sentence there says, "Karst features are common and
17 soils are generally acidic with moderate to low
18 fertility," is that right?

19 A. Yes. That's how it works.

20 Q. Does the moderate to low fertility, is that
21 evident on the Magruder site? There's no crops
22 growing on any of that land, is there?

23 A. Well, it does grow grass, and cows would
24 have liked it, but it has low fertility, yes.

25 Q. All right.

1 MR. MAUER: Your Honor, we would
2 offer BP-6.

3 HEARING OFFICER: BP-6 is offered.
4 Any objection?

5 MR. MCGOVERN: No objection.

6 MR. BROWNLEE: I'd like to reserve my
7 objection until I have a chance to cross-examine this
8 witness on how that document applies to the Magruder
9 site which is the site we're dealing with in this...

10 HEARING OFFICER: All right. Your
11 objection is reserved for after your
12 cross-examination. We will take it up at that time.
13 All right. Proceed.

14 Q. (By Mr. Mauer) And, Mr. Dressler, I want to
15 show you what's been marked as BP-7. Do you
16 recognize BP-7?

17 A. Yes.

18 Q. And what is BP-7?

19 A. BP-7 is information that I obtained through
20 the help of Lake of the Ozarks Water Group, Donna
21 Swall.

22 Q. And does that -- is that a report that you
23 looked at and relied upon as part of your
24 determination of karst topography being in and around
25 the Magruder site?

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<p>1 A. Yes, it is.</p> <p>2 Q. And does this document also confirm the</p> <p>3 karst topography in and around the Magruder site?</p> <p>4 A. Yes. It was presented at the same time as</p> <p>5 the Exhibit BP-8 was -- or 12, it is -- on the</p> <p>6 environmental impacts of quarrying stone in karst.</p> <p>7 Q. So these are all information that came out</p> <p>8 of and were part of the USGS study that's been</p> <p>9 identified?</p> <p>10 A. Yes.</p> <p>11 Q. And already admitted into evidence?</p> <p>12 A. And presented to that group, yes, sir.</p> <p>13 Q. All right. Thank you.</p> <p>14 MR. MAUER: Your Honor, we would</p> <p>15 offer BP-7.</p> <p>16 HEARING OFFICER: BP-7 is offered.</p> <p>17 Objections?</p> <p>18 MR. BROWNLEE: I have the same</p> <p>19 objection on --</p> <p>20 HEARING OFFICER: Same objection to 7</p> <p>21 pending cross-examination.</p> <p>22 Q. (By Mr. Mauer) Slide 25 is "Environmental</p> <p>23 Impacts," and you've identified dust, erosion, loss</p> <p>24 of habitat, loss of water wells, deterioration of</p> <p>25 limestone sinkholes. Are those all concerns that are</p>	<p>1 Water Act which does apply.</p> <p>2 Q. And is there anything in the Magruder plan</p> <p>3 or quarry application that sets forth any sort of</p> <p>4 plan for erosion control?</p> <p>5 A. None.</p> <p>6 Q. "Loss of habitat." You've made a reference</p> <p>7 about nesting eagles. Can you tell Mr. Tichenor what</p> <p>8 you mean by that?</p> <p>9 A. The Lake of the Ozarks is experiencing a</p> <p>10 return of nesting eagles to the area, and this is one</p> <p>11 that they may have occurring. And there was an</p> <p>12 article in the Lake Sun Leader, and they're beginning</p> <p>13 to occupy those. And although they're not federally</p> <p>14 endangered anymore, it's still something that's of</p> <p>15 great interest and concern.</p> <p>16 MR. MAUER: Your Honor, I'm just</p> <p>17 about done, and I think my timing is close, but can I</p> <p>18 do a couple of -- I just want to check off my list.</p> <p>19 I don't think I've offered BP-55, your Honor.</p> <p>20 Mr. Polhemus is keeping me up-to-date.</p> <p>21 HEARING OFFICER: Wait just a moment,</p> <p>22 Mr. Mauer. I'm not showing BP-55 as being offered,</p> <p>23 no.</p> <p>24 MR. MAUER: I would offer BP-55.</p> <p>25 HEARING OFFICER: All right. BP-55</p>
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<p>1 not addressed by the Magruder blast plan or the</p> <p>2 Magruder application?</p> <p>3 A. Yes, it was.</p> <p>4 Q. Are you concerned about the potential -- is</p> <p>5 it a concern for you that the blast plan in the</p> <p>6 proposed quarry site application does not identify</p> <p>7 any concern for dust and the impact of dust on the</p> <p>8 operation of the sewage treatment plant?</p> <p>9 A. Sure, it does. Yes. Absolutely.</p> <p>10 Q. Have you seen information about the</p> <p>11 expensive and very high-tech electronic equipment</p> <p>12 that is operated at the sewage treatment plant?</p> <p>13 A. Yes.</p> <p>14 Q. And is there any consideration in any of the</p> <p>15 information provided to you by the Magruder</p> <p>16 application or blast plan that even considers the</p> <p>17 potential of dust impact on that equipment?</p> <p>18 A. No, there hasn't been.</p> <p>19 Q. "Erosion." I think we've already talked</p> <p>20 about the potential that there's nothing in the blast</p> <p>21 plan for any sort of a detention basin should a break</p> <p>22 occur; is that right?</p> <p>23 A. That's right. And even for surface run-off,</p> <p>24 the quarry, as it gets bigger, has to control that</p> <p>25 through a detention pond to conform to the Clean</p>	<p>1 is offered. Any objection? No objection? It is</p> <p>2 received.</p> <p>3 Q. (By Mr. Mauer) And then, Mr. Dressler, I'd</p> <p>4 like to sum up, as an expert in both blasting,</p> <p>5 concrete and pipe construction and sewer lines and</p> <p>6 sewage treatment plants, have you evaluated the</p> <p>7 proposed blast plan for the Magruder quarry?</p> <p>8 A. Yes, I have.</p> <p>9 Q. And is it your opinion that the blast plan</p> <p>10 is unrealistic, unregulated and unenforceable as it</p> <p>11 was designed?</p> <p>12 A. Yes.</p> <p>13 Q. Is it incomplete because it doesn't consider</p> <p>14 the entire site and all of the potential impacts of</p> <p>15 the entire site?</p> <p>16 A. Yes, it is.</p> <p>17 Q. Are the comparisons offered by experts from</p> <p>18 Magruder inapplicable because they involve</p> <p>19 construction blasting rather than quarry blasting?</p> <p>20 A. I think so, yes.</p> <p>21 Q. Are the instances or examples offered by the</p> <p>22 Magruder experts incorrect because they involve</p> <p>23 welded steel pipes and a study which was not</p> <p>24 involving ductile iron pipe or the type of PVC pipe</p> <p>25 in ground on the Magruder site?</p>

29 (Pages 110 to 113)

1 A. Yes, but may I ask you to put in
2 high-strength steel pipe?

3 Q. Thank you.

4 A. And that was very much so.

5 Q. And is it your opinion that the risk of a
6 potential sewer break or damage to the sewage
7 treatment plant is such that the permit and plan as
8 offered by Magruder should be denied?

9 A. That's my opinion, yes, sir.

10 MR. MAUER: One moment, your Honor.
11 Nothing further, your Honor, at this time.

12 HEARING OFFICER: All right. We've
13 reached the noon hour. Mr. McGovern, may I inquire,
14 are you going to examine this witness.

15 MR. MCGOVERN: Yes, I am, Mr.
16 Tichenor.

17 HEARING OFFICER: Approximately how
18 long is your examination, do you anticipate.

19 MR. MCGOVERN: I would certainly
20 think less than an hour.

21 HEARING OFFICER: I assume you're
22 going to cover areas that are not going to be
23 repetitive of what we spent three hours on.

24 MR. MCGOVERN: Yes.

25 HEARING OFFICER: All right. Very

1 MR. MCGOVERN: No.

2 HEARING OFFICER: BP-23 is received.

3 Anything further, Mr. Mauer?

4 MR. MAUER: Nothing, your Honor.

5 Thank you for that housekeeping matter.

6 HEARING OFFICER: All right. Very
7 good. And with that, we will stand in recess until
8 1:00. We are off the record.

9 (Luncheon recess.)

10 HEARING OFFICER: Hearing will come
11 to order. Mr. McGovern, you're recognized for
12 interrogation of the witness.

13 MR. MCGOVERN: Thank you, Mr.
14 Tichenor.

15 EXAMINATION

16 QUESTIONS BY MR. MCGOVERN:

17 Q. Mr. Dressler, I'd just like to run through a
18 few of the items that were asked of you on direct
19 examination.

20 A. Yes, sir.

21 Q. I'd like to start with just the idea of what
22 we do know as compared to what we don't know. And it
23 sounds like to me that a lot of the concern you have
24 regarding this particular project are all the things
25 that we really don't know. Do you agree with that?

1 good. We will take our noon recess, and we need to
2 be back at 1:00. I remind all parties we are going
3 to finish this today, and if that means we stay late
4 into the evening, we will do so. So I trust that we
5 will not. I am anticipating that it's Friday and we
6 will all be out of here by 5:00 or sooner, if
7 possible. With that --

8 MR. MAUER: Your Honor, before we do,
9 I don't know that I offered the actual report that
10 we've been reviewing, BP-25.

11 HEARING OFFICER: I don't believe you
12 did. BP-25 and BP-23 have not been offered.

13 MR. MAUER: I would offer BP-25
14 and --

15 HEARING OFFICER: BP-25, any
16 objection?

17 MR. MCGOVERN: No.

18 MR. BROWNLEE: No.

19 HEARING OFFICER: BP-25 is received.
20 Are you moving for the admission of what I have
21 identified as BP-23 in the record?

22 MR. MAUER: BP-23 is offered, your
23 Honor.

24 HEARING OFFICER: Any objection to
25 BP-23?

1 A. I think that encapsulates it very well, yes,
2 I do.

3 Q. And let me, if I could, go through those
4 things and see if it's information we do have
5 sufficient information about or if it's a subject
6 matter for which we really don't have enough
7 information to really render an opinion as to whether
8 this project is, in fact, appropriate for this site.
9 And what I'd like to start with is, do we know or
10 have any real information about the condition of this
11 pipe?

12 A. No.

13 Q. Do we have any information or knowledge
14 regarding the condition of the joints on the pipe?

15 A. No.

16 Q. Do we know anything about the corrosion that
17 this pipe may have experienced during the period of
18 time that it's been located in the ground?

19 A. No, we don't.

20 Q. Do we know anything about any areas of
21 fatigue with respect to either the PVC or ductile
22 pipe?

23 A. No.

24 Q. Do we have any information or knowledge
25 relative to any existing fractures that may exist in

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<p>1 the ground located in the area adjacent to or</p> <p>2 supporting this pipe?</p> <p>3 A. No, sir.</p> <p>4 Q. Do we have any information or knowledge</p> <p>5 representative to a degree of deflection of either</p> <p>6 the ductile pipe or the PVC pipe?</p> <p>7 A. No, sir.</p> <p>8 Q. Do we know anything about the status of the</p> <p>9 compaction on the area in which the pipe traverses</p> <p>10 across the proposed quarry location?</p> <p>11 A. No, sir.</p> <p>12 Q. Do we know anything at all about the</p> <p>13 material that was utilized and is currently</p> <p>14 comprising the backfill for this particular project?</p> <p>15 A. To a degree, but in the strictest sense of</p> <p>16 knowing, the answer is no.</p> <p>17 Q. Now, when you say to a degree, are you</p> <p>18 referring to at least the specifications that were</p> <p>19 utilized in this project?</p> <p>20 A. Yes, sir.</p> <p>21 Q. And those specifications do nothing more</p> <p>22 than tell the contractor what he should do --</p> <p>23 A. Right.</p> <p>24 Q. -- relative to backfill; is that right?</p> <p>25 A. Yes. That's correct.</p>	<p>1 A. Actually, no, we don't.</p> <p>2 Q. All we really have is the information that</p> <p>3 you were able to find yourself, USGA reports and</p> <p>4 other information of that nature; is that correct?</p> <p>5 A. Yes. And Dr. Worsey provided some</p> <p>6 information, yes, sir.</p> <p>7 Q. And that information would tell you, at</p> <p>8 least generally speaking, that the geology in</p> <p>9 southern Missouri, including the area that comprises</p> <p>10 Lake Ozark, is generally a karst; is that right?</p> <p>11 A. That's what it tells me, but it is not</p> <p>12 listed on there as such.</p> <p>13 Q. Do we know if, in fact, there are any voids,</p> <p>14 sinkholes, underground bodies of water on this site?</p> <p>15 A. No, sir, we don't.</p> <p>16 Q. Do we know anything about the compaction</p> <p>17 densities that were utilized with respect to the</p> <p>18 installation of this pipe?</p> <p>19 A. No, sir.</p> <p>20 Q. Do we know if, in fact, there have been any</p> <p>21 cave-ins or voids under the area in which the pipe</p> <p>22 was laid?</p> <p>23 A. No, we don't.</p> <p>24 Q. Do you have any knowledge as to the actual</p> <p>25 degree of karst geology that might exist on this</p>
Page 119	Page 121
<p>1 Q. And what you're referring to is those</p> <p>2 specifications would provide information to the</p> <p>3 contractor as to acceptable size of stone or rock</p> <p>4 that can be used as part of the backfill process; is</p> <p>5 that correct?</p> <p>6 A. That's right.</p> <p>7 Q. But as you sit here today, do you know if,</p> <p>8 in fact, the contractor complied with those</p> <p>9 specifications relative to this construction?</p> <p>10 A. No, I don't.</p> <p>11 Q. Do we know anything about the bedding</p> <p>12 material that was utilized?</p> <p>13 A. Same answer.</p> <p>14 Q. We'll make the same distinction.</p> <p>15 A. Same distinction, no, I don't.</p> <p>16 Q. We do know what the specifications call for;</p> <p>17 is that correct?</p> <p>18 A. That's correct.</p> <p>19 Q. But we don't know if, in fact, the</p> <p>20 contractor in all respects complied with those</p> <p>21 specifications; is that right?</p> <p>22 A. That's correct.</p> <p>23 Q. Do we have any real information or knowledge</p> <p>24 relative to the make-up of the geology for this</p> <p>25 particular site?</p>	<p>1 particular site?</p> <p>2 A. No, sir, I don't.</p> <p>3 Q. Do we know if, in fact, there are large</p> <p>4 rocks leaning up against this pipe in some areas?</p> <p>5 And the area, of course, I'm talking about is that</p> <p>6 area that the pipe goes through the proposed quarry</p> <p>7 site.</p> <p>8 A. Their easement area. No, sir, we don't.</p> <p>9 Q. Do we know if there's actually any instances</p> <p>10 of deflection of the pipe, of bending of the pipe,</p> <p>11 being caused by either block motion or a pipe or a</p> <p>12 rock leaning up against that pipe?</p> <p>13 A. No, sir, we don't.</p> <p>14 Q. Do we know if there's any subsurface streams</p> <p>15 located in close proximity to this pipe?</p> <p>16 A. There's a creek, a dry weather creek, but</p> <p>17 that's -- could be more.</p> <p>18 Q. Do we know if there's any subsurface streams</p> <p>19 or ground water that travels near or adjacent to this</p> <p>20 pipe?</p> <p>21 A. No, we don't.</p> <p>22 Q. I come up with about 22 items,</p> <p>23 approximately, that we just don't know about with</p> <p>24 respect to this project. Would you agree with me</p> <p>25 that each of these are significant in coming to any</p>

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<p>1 conclusion whatsoever as to whether this site is 2 appropriate for the construction and operation of a 3 quarry? 4 A. Do I know any others? 5 Q. No. What I'm asking is, would you agree 6 with me that the items that we just went through, all 7 of that is information that would be significant in 8 determining whether or not this site is appropriate 9 for a quarry? 10 A. Well, yes, it is. 11 Q. If there was not a pipe, or two pipes in 12 this case, traversing across the area proposed for 13 the quarry, would all of those things I just 14 identified to you be of any significance? 15 A. No, sir, it wouldn't. It's where they are. 16 Q. So add to the list of few, do we know 17 anything about the exact depth of that trench? 18 A. No, sir. 19 Q. Do we know anything about the exact width of 20 that trench? 21 A. No, sir. 22 Q. Could you tell Mr. Tichenor what concerns 23 that you have if, in fact, there is subsurface water, 24 ground water, traveling near or adjacent to that 25 pipe?</p>	<p>1 the consultation with respect to that; is that right? 2 A. Yes. 3 Q. Now, Dr. Worsey has testified that his 4 expertise is in blasting. 5 A. Yes, sir. 6 Q. I think what he told me in response to 7 questions is that if you wanted to find out about 8 pipe or impact that blasting may have on pipe, I 9 should ask a pipe expert. 10 A. Yes, sir. 11 Q. Mr. Dressler, are you a pipe expert? 12 A. I think so, yes, sir. 13 Q. In fact, Dr. Worsey is telling us if we want 14 to know the second component of this opinion, we 15 should be asking you those questions; is that right? 16 A. That would be one -- that would be one way, 17 or some other expert in pipe, yes, sir. 18 Q. And the components I'm talking about is they 19 are telling us -- I'm talking about the Magruder 20 experts -- two things, one of which is they provided 21 testimony regarding blasting, and the second is 22 whether or not blasting is going to have any impact 23 on the pipe. 24 A. Yes, sir. 25 Q. As you sit here today, do we have enough</p>
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<p>1 A. It causes erosion of the backfill supporting 2 the pipe, and it is a concern that that water -- how 3 is it going to be handled and where it's intercepted 4 and diverted. That's water that's going to somebody 5 else for drinking water, and so it's reduction of the 6 ground water for water quality problems. 7 Q. And can that water also cause displacement 8 of the soil that may be, in fact, acting as the 9 bedding or the base of that pipe? 10 A. Yes. That's what I meant by erosion. 11 Q. And if we have that erosion, is it possible 12 that you could experience the type of breaks that 13 were identified within your report, either from the 14 standpoint of a burst or the failure of the joint? 15 A. Yes, sir. That's correct. 16 Q. Now, you're familiar with the testimony and 17 the reports provided by Dr. Worsey, Mr. Henderson and 18 Mr. Mirabelli; is that correct? 19 A. Yes, sir. 20 Q. As I understand it, Mr. Henderson is a 21 salesman of explosives, the dynamite used for 22 blasting; is that right? 23 A. Yes, sir. Dyno Nobel. 24 Q. Mr. Mirabelli, effectively his company 25 provides the services, the actual blasting itself and</p>	<p>1 information to come to any real conclusion as to 2 whether or not there will be that impact on the pipe? 3 A. Absolutely not. 4 Q. You were asked some questions as well 5 regarding if there is, in fact, a break in the line, 6 either a burst or a break or a failure at the joint. 7 There was discussion about building detention basins 8 and things of that nature. The detention basin 9 itself would do nothing more than stop the water from 10 a ground surface flow into either the river or the 11 lake; is that correct? 12 A. Just the river. It shouldn't get -- or 13 couldn't get into the lake, I don't believe. 14 Q. And from the -- and you're talking just from 15 the topography standpoint? 16 A. Yes. 17 Q. It's going to flow downhill to the river? 18 A. Yes. 19 Q. You're right. That detention basin, unless 20 it is constructed with some sort of synthetic liner, 21 isn't going to stop that material from then leaching 22 into the ground and traveling through the ground 23 water in some fashion, would it? 24 A. That's correct. 25 Q. When you're talking about retention basins</p>

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<p>1 with respect to the construction of a quarry, one of</p> <p>2 the reasons in which you did that in normal</p> <p>3 construction practice is simply to create a</p> <p>4 sedimentation pond; is that correct?</p> <p>5 A. That's correct.</p> <p>6 Q. And the purpose of that sedimentation pond</p> <p>7 is simply to collect the sediment that might be</p> <p>8 migrating out of this quarry; is that correct?</p> <p>9 A. And keep it contained from getting into the</p> <p>10 water flow.</p> <p>11 Q. But a sedimentation pond of the nature we've</p> <p>12 just discussed is not going to protect the</p> <p>13 environment or protect the river in the event of a</p> <p>14 burst in this line, is it?</p> <p>15 A. That's quite correct, yes, sir.</p> <p>16 Q. BP-54, which is RI 9523?</p> <p>17 A. Yes.</p> <p>18 Q. Does that report provide any guidance</p> <p>19 whatsoever in determining whether or not the pipes</p> <p>20 that are located on this project are going to be</p> <p>21 damaged?</p> <p>22 A. Not exactly. I mean, not conclusively it</p> <p>23 doesn't.</p> <p>24 Q. And the pipe that is referenced within</p> <p>25 RI 9523 is the high-density steel welded pipe?</p>	<p>1 that he doesn't install one end too far into the</p> <p>2 other end; isn't that correct?</p> <p>3 A. That's correct.</p> <p>4 Q. And, in fact, there's a blue line often put</p> <p>5 around the pipe to ensure that the pipe is only</p> <p>6 inserted the correct distance; is that correct?</p> <p>7 A. That's correct.</p> <p>8 Q. And the reason for that is to avoid failure</p> <p>9 at that joint; is that correct?</p> <p>10 A. That's right.</p> <p>11 Q. And the failure I can get is a fatigue</p> <p>12 failure?</p> <p>13 A. Yes, sir.</p> <p>14 Q. Do we have any information or knowledge --</p> <p>15 MR. BROWNEE: Your Honor, let me ask</p> <p>16 a question here. Is this cross-examination? Because</p> <p>17 if so, it's friendly cross-examination and I'm going</p> <p>18 to object to it. He's leading the witness on every</p> <p>19 single question, and it should be direct examination.</p> <p>20 Otherwise we're put at a serious disadvantage --</p> <p>21 HEARING OFFICER: The Hearing Officer</p> <p>22 considers it direct examination because this is a</p> <p>23 petitioner's witness. Mr. McGovern, if you could,</p> <p>24 you have been essentially testifying for my record,</p> <p>25 and Mr. Dressler has basically just been confirming</p>
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<p>1 A. High-strength.</p> <p>2 Q. High-strength?</p> <p>3 A. Yes. That's correct.</p> <p>4 Q. The PVC pipe isn't welded, is it?</p> <p>5 A. Wait just a minute. Would you restate that,</p> <p>6 because I was thinking what was referred to in RI,</p> <p>7 which is welded.</p> <p>8 Q. I understand. And that's what I would like</p> <p>9 to do. I'm sorry, Mr. Dressler. I should have been</p> <p>10 more clear. Looking at RI 9523, that report talks</p> <p>11 about high-strength steel welded pipe?</p> <p>12 A. Yes, sir.</p> <p>13 Q. When I'm talking about welded, it is welded</p> <p>14 at the joints; is that correct?</p> <p>15 A. That's correct.</p> <p>16 Q. Comparing that, then, to the pipe that is on</p> <p>17 this site, the site that we're talking about for the</p> <p>18 Magruder quarry, one of which is PVC pipe, correct?</p> <p>19 A. Yes, sir.</p> <p>20 Q. PVC pipe is actually put together, I've got</p> <p>21 a male and female part, and then glue is utilized to</p> <p>22 keep that pipe together; is that correct?</p> <p>23 A. That's correct.</p> <p>24 Q. And as part of that pipe installation, the</p> <p>25 contractor installing the pipe wants to make sure</p>	<p>1 your testimony, so if you could -- I believe based</p> <p>2 upon what -- the background of this witness, I</p> <p>3 believe that the question can be framed in such a</p> <p>4 manner that's correct.</p> <p>5 MR. MCGOVERN: That's fine. I</p> <p>6 believe every question I asked him as to whether he</p> <p>7 knew or didn't know information as to the site were</p> <p>8 not leading; they were direct questions. These I</p> <p>9 understand.</p> <p>10 HEARING OFFICER: They met my</p> <p>11 definition of leading. And I've granted you some</p> <p>12 leeway, but let's watch it, let's try not to be</p> <p>13 testifying in place of the witness.</p> <p>14 MR. MCGOVERN: Certainly.</p> <p>15 HEARING OFFICER: Proceed.</p> <p>16 Q. (By Mr. McGovern) Would you, Mr. Dressler,</p> <p>17 explain to Mr. Tichenor the difference between the</p> <p>18 connections on the joint of a PVC pipe as compared to</p> <p>19 the high-strength steel pipe that was welded?</p> <p>20 A. Yes, sir. They're as different as night and</p> <p>21 day, male and female. They aren't the same thing.</p> <p>22 And the joints and how it's constructed of the</p> <p>23 high-strength steel pipe is very strong. The other</p> <p>24 joint is glued, and that's all that's holding it</p> <p>25 together, outside of it's slipped together on the</p>

1 plastic pipe. And that's it.

2 Q. Would you also describe to Mr. Tichenor in
3 as much detail as you choose the distinction between
4 the ductile iron connection and the high-strength
5 steel welded connection?

6 A. Right. There's still a major difference in
7 that because the high-strength steel is much stronger
8 than the ductile iron. The ductile iron is very
9 good, but it's good for corrosion and what it's
10 intended to do and sit in the ground undisturbed and
11 carry sewage or storm water. And its joints are a
12 slip joint, and then it has bolted reinforcing around
13 it to keep it together in lieu of welding. So,
14 again, dissimilar.

15 Q. Getting back, then, to RI 9523, would you
16 describe to Mr. Tichenor if, in fact, in your opinion
17 that document provides any real guidance to this
18 Commission in making a determination as to whether or
19 not there is going to be damage to the pipe located
20 on this site?

21 A. Unfortunately, I support and agree with RI,
22 but it provides no guidance because what it has is
23 pipe that's in a different situation totally and a
24 different kind of pipe than what we're dealing with.

25 Q. I want to ask a question now in terms of the

1 karst geology. I think you described that as
2 typically found in areas of limestone. And I know
3 there's a reference to a lack of fertility of the
4 ground. Considering that you may have areas in which
5 there is the limestone, there may, then, be a break
6 in that limestone and then limestone resumes again,
7 is what effectively is happening there is that I have
8 soil that is maybe compacted to within that opening?

9 A. From the top or the -- yes, it is, that you
10 can't see what's going on underneath the ground. And
11 there's all kinds of layers of limestone and other
12 medium in between the dolomite, which is at the very
13 bottom.

14 Q. And could there also be instances in which
15 there is limestone throat and then limestone resumes
16 again but it will appear to be simply a flat surface
17 because the soil has compacted into that hole?

18 A. Yes, sir. And it's a very common
19 occurrence. In fact, even developments have been
20 built above sinkholes without knowing that they're
21 there because all they did was look.

22 Q. If, in fact, there is blasting, do you have
23 any concerns as to whether or not that dirt which is
24 now compacted into that hole could release and track
25 down?

1 A. It could, yes.

2 Q. And would that be comparable to what we
3 would see happening in an hourglass?

4 A. Yes.

5 Q. That effectively that soil would then drop
6 down through that hole?

7 A. Yes. Then you'd have a sinkhole.

8 Q. Do we know if, in fact, this pipe is sitting
9 over any potential sinkholes?

10 A. No, we don't.

11 Q. Do you have any concern that blasting may
12 cause that soil compacted into one of these holes to
13 shake loose and then release?

14 A. It could, yes, sir.

15 Q. I just want to ask you some questions... In
16 Mr. Mirabelli's report, he relies upon an article he
17 calls "Explosive Engineering, Construction Vibrations
18 and Geotechnology." There are other reports that are
19 identified which we couldn't locate, but at least on
20 this one I want to ask you if you agree with some of
21 the conclusions of that report?

22 A. I've read some of those reports. I didn't
23 include them in any of my work, but yes.

24 Q. I'll just ask you the questions.

25 A. Sure.

1 Q. There is a statement within the report, in
2 that article relied upon by Mr. Mirabelli, that says,
3 "If damage is project-related, it is more likely to
4 be from block motion rupturing, cratering, venting or
5 associated physical effects that are the primary
6 sources of close-in blasting damage." Do you agree
7 with that statement?

8 A. Yes. The author is a recognized expert in
9 geotechnical and explosives.

10 Q. And that is Lewis Oriard?

11 A. Oriard, I guess. I mean, I have trouble
12 pronouncing his name, but...

13 Q. The article relied upon by Mr. Mirabelli
14 also says, "The more direct concern during adjacent
15 blasting activities is block motion which can easily
16 rupture a pipeline." Do you agree with that?

17 A. Yes, sir, I do. That's the most common.

18 Q. It also states, "It is easily recognized
19 that old, corroded and leaking pipelines do not have
20 as high a strength as new, recently installed lines
21 of the same type." Do you agree with that statement?

22 A. Yes, sir. Yes. And I've told Mr. Tichenor
23 that previously, too. Yes. Sure do.

24 Q. It goes on to state that "That increased
25 sensitivity would apply to large strains during

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<p>1 earthquakes as well as block motion from adjacent 2 blasting that did not effectively limit perimeter 3 breakage." Do you agree with that? 4 A. Yes, sir, I do. 5 Q. It goes on to state -- this is with respect 6 to definition of damage to ductile materials -- "A 7 structural steel member can undergo large 8 deformations close to its yield length a limited 9 number of times where there is some loss of strength 10 and the beginnings of metal fatigue." Do you agree 11 with that? 12 A. Yes, sir. That's how the steel-type 13 materials work. 14 Q. And would that have been comparable to 15 Mr. Mauer's demonstration of moving that paper clip 16 back and forth to failure? 17 A. Yes. That's called ductile. 18 Q. It states, "There is some indication that 19 this may be independent of the overpressure, but 20 there is some indication that the backfill may behave 21 as a viscous fluid, probably a function of loading 22 time and stress level, adding importance to the 23 stiffness of the buried pipe." Do you agree with 24 that? 25 A. Yes, I do.</p>	<p>1 wheel loads on the rock-removing trucks, or the 2 common bobtail tandem trucks like that haul rock and 3 dirt around to construction sites. And I went 4 through and calculated what the wheel loads could be 5 to where it would run over the easement for where the 6 pipes are buried, and it would increase the load on 7 that substantially for each time they drove across. 8 And that wasn't considered. It's a thing that could 9 contribute to failure because of overloading and 10 stressing the pipe for other reasons. 11 Q. Could that also be referred to as fracture 12 load testing? 13 A. Yes. 14 Q. And is it your conclusion that there could 15 be a potential failure of that pipe as a result of 16 the trucks driving either near or over the top of the 17 area in which the pipe is located? 18 A. Yes, sir. 19 Q. During the course of Dr. Worsey's testimony, 20 he indicated that his blast plan is all theory. 21 Would you agree with that? 22 A. Yes. Yes, sir. 23 Q. He indicated that until he had actual 24 empirical data, his report would remain all theory. 25 Do you agree with that?</p>
Page 135	Page 137
<p>1 Q. "Theories have not been able to predict very 2 accurately the dynamic failure mode and load for 3 buried cylinders." Do you agree with that? 4 A. Yes, sir. 5 Q. On Page 4 of your report... 6 A. I don't really have a copy of it here. 7 HEARING OFFICER: BP-25? 8 MR. MAUER: Yes, Mr. Tichenor. 9 A. What was the page number again? 10 Q. (By Mr. McGovern) Page 4. 11 A. 4? Okay. 12 Q. This has to do with Considerations, Pipe 13 Construction and Installation. "Anticipated" is the 14 second bullet point. Do you see that? 15 A. Yes. 16 Q. Could you explain to Mr. Tichenor what you 17 are referencing with respect to anticipated loads? 18 A. Anticipated loads should have included, but 19 it didn't, that trucks, heavy, earth-moving, well, 20 quarry trucks, could be running over the pipelines 21 for different reasons, either expansion of the 22 unshown part of the quarry or for some other reason 23 to get material out during some operations. And the 24 anticipated loads would be the wheel loads when the 25 heavy -- these are very large, about 6,000-pound</p>	<p>1 A. Yes, sir. 2 MR. MCGOVERN: I don't have anything 3 further, Mr. Tichenor. 4 HEARING OFFICER: Mr. Duggan? 5 MR. DUGGAN: I'd prefer to defer to 6 Mr. Brownlee first and then ask any follow-up 7 cross-examination. 8 HEARING OFFICER: All right. 9 Probably a better order of cross-examination, you're 10 correct. Mr. Brownlee, cross-examination. 11 EXAMINATION 12 QUESTIONS BY MR. BROWNLEE: 13 Q. Mr. Dressler, my name is Richard Brownlee. 14 I represent the Magraders. You and I met yesterday 15 during your deposition, correct? 16 A. Yes, sir. 17 Q. You recall I asked you a number of questions 18 and you responded under oath, correct? 19 A. Yes, sir. 20 Q. And I'm going to take some of this kind of 21 out of order. And I apologize, but we've got so many 22 different subjects and documents, so I'll start with 23 one place that I think is significant. You've 24 testified that this pipeline on the Magruder property 25 has zero tolerance for any vibration, correct?</p>

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<p>1 A. Yes, sir.</p> <p>2 Q. That means there can be no vibration that</p> <p>3 reaches this pipeline, correct?</p> <p>4 A. That's very good. Yes, sir.</p> <p>5 Q. And are you of the opinion that as sewage is</p> <p>6 going through these pipelines as we sit here today</p> <p>7 that there are vibrations in those pipelines right</p> <p>8 now?</p> <p>9 A. There may be some.</p> <p>10 Q. Pipelines that are carrying liquid under</p> <p>11 pressure that's moving through them have some</p> <p>12 vibration, do they not, sir?</p> <p>13 A. I think so. I don't think it would be very</p> <p>14 much, but yes, there --</p> <p>15 Q. I didn't ask you that. If they're more than</p> <p>16 zero, according to your testimony, that's completely</p> <p>17 wrong, isn't it, on these pipelines?</p> <p>18 A. No. I wouldn't say so.</p> <p>19 Q. So you have a zero that is not zero; it's</p> <p>20 more than zero. Is that what now you're testifying</p> <p>21 to?</p> <p>22 A. No, sir.</p> <p>23 Q. So zero is zero, is it not?</p> <p>24 A. Zero is zero as intended for new additional</p> <p>25 loads or more than the intended design. And the</p>	<p>1 that a study. He just investigated and inquired of</p> <p>2 someone.</p> <p>3 Q. (By Mr. Brownlee) Well, you told me earlier</p> <p>4 that in your investigation on the ductile iron you</p> <p>5 were unable to determine if there was any proper</p> <p>6 tolerance for that line that that whole industry knew</p> <p>7 about, correct?</p> <p>8 MR. MCGOVERN: I'm going to object to</p> <p>9 improper impeachment, if Mr. Brownlee is referring to</p> <p>10 "you told me earlier" he was talking about the</p> <p>11 deposition, or is he talking about the earlier</p> <p>12 testimony today?</p> <p>13 HEARING OFFICER: He was talking</p> <p>14 about the earlier testimony today. We had testimony</p> <p>15 from this witness this morning.</p> <p>16 MR. MCGOVERN: I understand.</p> <p>17 HEARING OFFICER: The objection is</p> <p>18 overruled. You need to restate the question.</p> <p>19 A. Well, some of the terms he's using isn't</p> <p>20 quite correct, but we weren't -- I was not able to</p> <p>21 get what the acceptable vibration criterion is by the</p> <p>22 manufacturer, that is correct. And I think that's</p> <p>23 what I testified to.</p> <p>24 Q. (By Mr. Brownlee) Well, do you know the</p> <p>25 current vibration limits that those lines are having</p>
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<p>1 flow --</p> <p>2 Q. Do you know --</p> <p>3 A. Just give me a moment. I'll connect it.</p> <p>4 The flow through the pipe is a design condition that</p> <p>5 is taken care of in the design and installation of</p> <p>6 the pipe, and the zero that's being referred to for</p> <p>7 zero tolerance is new additional vibrations that are</p> <p>8 not common to what's going on.</p> <p>9 Q. Well, you've testified that you made a study</p> <p>10 regarding the pipeline that's there, the steel that's</p> <p>11 in there, and you said you weren't able to determine</p> <p>12 what the tolerance is.</p> <p>13 MR. MAUER: I'm going to object, your</p> <p>14 Honor. I don't think there was any testimony about</p> <p>15 him doing a study on the steel that was there.</p> <p>16 There's no steel there. I don't know what study Mr.</p> <p>17 Brownlee's referring to, but there's certainly no</p> <p>18 steel on the pipes.</p> <p>19 MR. BROWNLEE: Ductile iron. I'm</p> <p>20 sorry.</p> <p>21 HEARING OFFICER: Rephrase it. I</p> <p>22 assume you're referring to the investigation.</p> <p>23 MR. BROWNLEE: Yeah, the</p> <p>24 investigation.</p> <p>25 HEARING OFFICER: I didn't consider</p>	<p>1 right now?</p> <p>2 A. No, sir, I don't.</p> <p>3 Q. And are you aware that the 24-inch line was</p> <p>4 installed in 2002?</p> <p>5 A. I think so, yes, sir.</p> <p>6 Q. And are you aware that the 18-inch line was</p> <p>7 installed in 1984?</p> <p>8 A. Yes, sir.</p> <p>9 Q. And do you know when that second line was</p> <p>10 put in in 2002 what type of equipment they used right</p> <p>11 next to the 18-inch line?</p> <p>12 A. No, I don't.</p> <p>13 Q. Would you know that if a rock trencher was</p> <p>14 used and the 963 high lift and rock chippers, would</p> <p>15 those have created additional vibrations than what</p> <p>16 exist at present on the PVC line?</p> <p>17 A. I was told, but it wasn't -- I wasn't able</p> <p>18 to confirm it anyway that a rock cutter was used</p> <p>19 where rock intervened at the trench level.</p> <p>20 Q. Well, didn't you tell me yesterday that</p> <p>21 actually operating equipment such as rock hoes and</p> <p>22 trenchers and chippers was actually more dangerous</p> <p>23 around a pipeline in terms of vibration than</p> <p>24 blasting?</p> <p>25 A. You left part of the statement out.</p>

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<p>1 Q. Well, what did I leave out?</p> <p>2 A. And removing the soil around it.</p> <p>3 Q. That's a different subject. I'm just</p> <p>4 talking about running the equipment.</p> <p>5 MR. MAUER: I'm going to object, your</p> <p>6 Honor, to the extent now he's asking, didn't you tell</p> <p>7 me yesterday. The witness is entitled to have a</p> <p>8 complete response, and I object to his</p> <p>9 characterization.</p> <p>10 HEARING OFFICER: Exactly. And if</p> <p>11 this is part of the deposition, then it is</p> <p>12 appropriate to show the witness exactly what you're</p> <p>13 referring to.</p> <p>14 MR. BROWNLEE: We don't have it</p> <p>15 because it was done yesterday.</p> <p>16 HEARING OFFICER: It was done</p> <p>17 yesterday?</p> <p>18 MR. BROWNLEE: Uh-huh.</p> <p>19 HEARING OFFICER: Then we're going to</p> <p>20 have to play a little fast and loose, then.</p> <p>21 Q. (By Mr. Brownlee) Let me ask you, can you</p> <p>22 ever blast without vibrations?</p> <p>23 A. If you're far enough away you can.</p> <p>24 Q. Okay. But in terms of if you're within</p> <p>25 500 feet of this pipeline, can you ever blast, in</p>	<p>1 MR. MAUER: Objection, your Honor.</p> <p>2 If he's got the transcript --</p> <p>3 HEARING OFFICER: Mr. Mauer, we've</p> <p>4 already established we don't have the transcript, so</p> <p>5 that's why I said we're going to have to play fast</p> <p>6 and loose. I'm going to grant leeway to the witness</p> <p>7 to give explanation. I'm going to have to simply</p> <p>8 rely on Mr. Brownlee's recollection and any notes he</p> <p>9 took in the deposition that he asked that question</p> <p>10 and the witness said no. In a pristine situation we</p> <p>11 would have the transcript. We don't have it, so</p> <p>12 we're going to proceed in this fashion. Mr.</p> <p>13 Brownlee, will you restate what you believe from your</p> <p>14 recollection or your notes was the question and the</p> <p>15 response that you understood the witness to give.</p> <p>16 Q. (By Mr. Brownlee) My best understanding, I</p> <p>17 asked a question, do you know of any other expert</p> <p>18 that has ever had the zero tolerance opinion for</p> <p>19 blasting around pipelines.</p> <p>20 A. And I believe I said --</p> <p>21 Q. And what was your answer?</p> <p>22 A. And the answer is still the same, no, I</p> <p>23 don't.</p> <p>24 Q. I asked you about the source of this zero</p> <p>25 tolerance opinion, and isn't it true that you stated</p>
Page 143	Page 145
<p>1 your expert opinion, that there won't be some</p> <p>2 vibration hit this line?</p> <p>3 A. No pun intended, but that's a loaded</p> <p>4 question, because it's how much explosives you set</p> <p>5 off that I'd need to know before I could answer that</p> <p>6 question.</p> <p>7 Q. Your opinion, your zero tolerance opinion,</p> <p>8 it is in no learned treatise, is it, sir?</p> <p>9 A. I don't think so. That I've run across.</p> <p>10 Q. And it is in no Bureau of Mines safety</p> <p>11 documents produced by the Federal Government where</p> <p>12 zero tolerance is discussed for pipelines, is it,</p> <p>13 sir?</p> <p>14 A. I don't think I've ever seen it there, no,</p> <p>15 sir.</p> <p>16 Q. And have you ever in your 44 years had a</p> <p>17 project with a pipeline where there was a zero</p> <p>18 tolerance factor?</p> <p>19 A. No, sir. This is the first.</p> <p>20 Q. And do you know of any other expert that</p> <p>21 recognizes your theory of zero tolerance?</p> <p>22 A. I haven't checked, but I'm sure --</p> <p>23 Q. Did I ask you yesterday in your deposition</p> <p>24 if you knew any other expert that knew a zero</p> <p>25 tolerance opinion and your answer was, no, I don't?</p>	<p>1 it was because of the remote location and that if</p> <p>2 there was a leak, they wouldn't know about it?</p> <p>3 A. That wasn't referring to zero tolerance.</p> <p>4 That was referring, as I thought, to the severity of</p> <p>5 the risk of damage.</p> <p>6 Q. Okay. And let me ask you, on this zero</p> <p>7 tolerance on these two lines, do they start at the</p> <p>8 sewer plant that we've discussed in this proceeding?</p> <p>9 A. Yes, sir.</p> <p>10 Q. And does it go on, these two lines, up</p> <p>11 through the Magruder property?</p> <p>12 A. Yes, sir.</p> <p>13 Q. And then once it exits the Magruder</p> <p>14 property, is the zero tolerance still on those lines</p> <p>15 as it proceeds all the way through the City of Osage</p> <p>16 Beach and the new Highway 54 construction project</p> <p>17 clear down to where I guess it crosses the Grand</p> <p>18 Glaize Bridge?</p> <p>19 A. Well, you know, that question hasn't ever</p> <p>20 been asked of me yet, but it's under way, and I would</p> <p>21 say yes, it will.</p> <p>22 Q. So that zero tolerance with no vibration</p> <p>23 literally follows everywhere those lines go; is that</p> <p>24 not correct?</p> <p>25 A. The lines -- you're mixing in a separate --</p>

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<p>1 a third line, and the --</p> <p>2 Q. No, I'm not. I'm just talking about these</p> <p>3 two.</p> <p>4 A. Okay. All right.</p> <p>5 HEARING OFFICER: Well, for</p> <p>6 clarification, Mr. Brownlee, the zero tolerance, this</p> <p>7 witness never testified, according to my</p> <p>8 recollections, to the tolerance on the PVC. In fact,</p> <p>9 he distinctly said that there was, although he never</p> <p>10 said what that tolerance was. He can only be</p> <p>11 testifying on the zero tolerance based upon the</p> <p>12 testimony we now have on the record on the ductile</p> <p>13 iron.</p> <p>14 Q. (By Mr. Brownlee) Well, I'm assuming,</p> <p>15 Mr. Dressler, yesterday that when you testified, I</p> <p>16 asked you about zero tolerance, that was for both</p> <p>17 those lines, was it not?</p> <p>18 A. That's how I answered it, yes, sir.</p> <p>19 HEARING OFFICER: All right. The</p> <p>20 Hearing Officer appreciates the clarification.</p> <p>21 Q. (By Mr. Brownlee) And I believe you</p> <p>22 testified that traffic, would that violate the zero</p> <p>23 tolerance if the traffic is being driven over these</p> <p>24 lines?</p> <p>25 A. There's traffic and there's traffic. The</p>	<p>1 A. Yes, sir, that's correct. And I provided</p> <p>2 calculations for that.</p> <p>3 Q. Okay. But that would then be automatically</p> <p>4 in violation of the zero tolerance that exists on</p> <p>5 those lines today by having truck traffic, haul truck</p> <p>6 traffic, crossing them; is that not correct?</p> <p>7 A. That's correct.</p> <p>8 Q. Now, do you know where this ductile iron</p> <p>9 pipe goes in terms of crossing the Grand Glaize</p> <p>10 Bridge?</p> <p>11 A. I haven't looked at it that much. I've been</p> <p>12 focusing strictly on the Magruder property.</p> <p>13 Q. So you don't know if the ductile iron pipe</p> <p>14 goes under the Grand Glaize Bridge?</p> <p>15 A. No, sir, I don't.</p> <p>16 Q. Would you be able to identify --</p> <p>17 A. I imagine it -- it wouldn't surprise me.</p> <p>18 I'm sure it does.</p> <p>19 Q. Well, do you want to go up and take a look</p> <p>20 at whatever that exhibit is?</p> <p>21 A. I mean, not especially, because that's not</p> <p>22 on the Magruder property.</p> <p>23 Q. Well, you've testified all sorts of places</p> <p>24 not on the Magruder property.</p> <p>25 MR. MAUER: Well, wait a minute, your</p>
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<p>1 truck -- the rock hauling trucks would, yes, but</p> <p>2 that's more than just traffic.</p> <p>3 Q. So the rock hauling, like if you had rock</p> <p>4 trucks being hauled out of a quarry area or a blasted</p> <p>5 area that's crossing over the line, that is to be</p> <p>6 like a haul road, correct?</p> <p>7 MR. MAUER: Well, I'm going to</p> <p>8 object. I think the witness -- I want to clarify.</p> <p>9 Is he talking about the rock trucks crossing the</p> <p>10 lines on the Magruder property, or are you talking</p> <p>11 about a line crossing underneath a road and you drive</p> <p>12 a truck on top of a road?</p> <p>13 MR. BROWNLEE: I'll rephrase it</p> <p>14 again.</p> <p>15 HEARING OFFICER: Rephrase.</p> <p>16 Q. (By Mr. Brownlee) If you had a blasting</p> <p>17 area and the haul trucks were driving out of the</p> <p>18 blasting area carrying rock and crossed over these</p> <p>19 sewer lines, it's your opinion these lines would</p> <p>20 rupture. Is that what you told me yesterday?</p> <p>21 A. Yes.</p> <p>22 Q. And when these trucks cross over these two</p> <p>23 buried lines, they're going to create additional</p> <p>24 vibrations that aren't there now, would they not,</p> <p>25 sir?</p>	<p>1 Honor. I'm going to object to that. I don't think</p> <p>2 Mr. Dressler deserves that type of --</p> <p>3 MR. BROWNLEE: Well, he said there's</p> <p>4 karst topography in the Ozarks. That's a little past</p> <p>5 the Magruder property, I'd say.</p> <p>6 MR. MAUER: He didn't testify about</p> <p>7 the pipeline.</p> <p>8 HEARING OFFICER: Well, I guess we</p> <p>9 can clarify it by, Mr. Brownlee, will you lay a</p> <p>10 foundation relative to that pipeline that goes</p> <p>11 through Osage Beach as to the knowledge of this</p> <p>12 witness.</p> <p>13 MR. BROWNLEE: Well, he doesn't have</p> <p>14 to get up.</p> <p>15 Q. (By Mr. Brownlee) I'm looking at BP-22 and</p> <p>16 following the sewer line as it goes down. Are you</p> <p>17 aware, sir, that it goes under the Grand Glaize</p> <p>18 Bridge?</p> <p>19 A. Yes, sir. I've driven the bridge and I've</p> <p>20 seen it.</p> <p>21 Q. And are you aware that the traffic on the</p> <p>22 Grand Glaize Bridge as we sit here today consists of</p> <p>23 large trucks and construction equipment and cars that</p> <p>24 would create a vibration on that ductile iron pipe?</p> <p>25 A. Yes, sir.</p>

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<p>1 Q. And would that again be in excess of the</p> <p>2 zero tolerance that you say that line can't take?</p> <p>3 A. Well, frankly, I don't know because I</p> <p>4 haven't measured it.</p> <p>5 Q. Now I'm going to go back a little bit to the</p> <p>6 questions on direct examination just to try to catch</p> <p>7 that up. You stated to Mr. Mauer that there had been</p> <p>8 a book created when you wrote your thesis in 1986.</p> <p>9 A. The thesis was converted into a book that's</p> <p>10 on -- for use in the Johnson County Public Library,</p> <p>11 and that's why it was called a book.</p> <p>12 Q. It's just your thesis was just bound, was it</p> <p>13 not, sir?</p> <p>14 A. Well, yes.</p> <p>15 Q. I mean, it wasn't published by a publisher</p> <p>16 or an editor, was it, sir?</p> <p>17 A. No. Published by me. I made a lot of</p> <p>18 copies.</p> <p>19 Q. And you stated that you've had no formal</p> <p>20 training in sewer or gas lines but it's all been</p> <p>21 self-taught, correct?</p> <p>22 A. We got basic sewer -- water and sewage in</p> <p>23 college, but it wasn't -- didn't cover anything about</p> <p>24 how to design or install the lines, so that's right.</p> <p>25 That's how it works.</p>	<p>1 prepared by two people in your company, you or your</p> <p>2 son; is that correct?</p> <p>3 A. Yes.</p> <p>4 Q. Your son is not even an engineer of any</p> <p>5 sort, is he, sir?</p> <p>6 A. That's correct.</p> <p>7 Q. And I believe you testified that the RI 8507</p> <p>8 is a Bible in the industry in terms of blasting; is</p> <p>9 that not correct?</p> <p>10 A. That's a slang name for it, yes, sir.</p> <p>11 Q. Well, that's your testimony, wasn't it,</p> <p>12 yesterday?</p> <p>13 A. Well, yes, it was.</p> <p>14 Q. And that document contains the Appendix B</p> <p>15 which has the Z curve that's contained in the</p> <p>16 Missouri Blasting Safety Act, does it not?</p> <p>17 A. I believe so.</p> <p>18 Q. You rely on that, do you not, sir?</p> <p>19 A. Yes.</p> <p>20 Q. And do you understand the significance of</p> <p>21 quarry development for the state of Missouri?</p> <p>22 A. I would have to say no, that I don't.</p> <p>23 Q. Do you understand that Missouri, where it</p> <p>24 ranks in the nation in terms of limestone production</p> <p>25 used in industry and construction?</p>
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<p>1 Q. And you don't hold any geology degrees, do</p> <p>2 you?</p> <p>3 A. No, sir.</p> <p>4 Q. And what does a geology course tell you in</p> <p>5 terms of geotechnical engineering that you said you</p> <p>6 did have?</p> <p>7 A. There's quite a bit of overlap and interplay</p> <p>8 between the two, and the geologists know more about</p> <p>9 how the rocks and different stratas were formed, and</p> <p>10 the geotechnical knows more about how the rocks are</p> <p>11 broken and how they're used to produce things.</p> <p>12 Q. So the geology is more on rock formation,</p> <p>13 such as karst; is that right?</p> <p>14 A. I would think so, yes, sir.</p> <p>15 Q. And you've had no formalized training</p> <p>16 regarding blasting around sewer plants or sewer</p> <p>17 lines, have you, sir?</p> <p>18 A. That's correct.</p> <p>19 Q. And have you ever been a licensed Missouri</p> <p>20 blaster?</p> <p>21 A. No, sir. There's no need to.</p> <p>22 Q. And do you have any licensed blasters</p> <p>23 employed with your company?</p> <p>24 A. No, sir. There's no need to.</p> <p>25 Q. And you said there are blast plans to be</p>	<p>1 A. Roughly in the top ten, I believe, but --</p> <p>2 Q. Thank you. I believe... Turn, if you</p> <p>3 could -- what's the exhibit on the vitae? If you</p> <p>4 could, Mr. Dressler --</p> <p>5 MR. BROWNLEE: Let me approach the</p> <p>6 witness. If I could, maybe I could help you here.</p> <p>7 A. Oh, sure.</p> <p>8 Q. (By Mr. Brownlee) That's your vitae, which</p> <p>9 is Exhibit BP-24, correct?</p> <p>10 A. Yes, sir.</p> <p>11 Q. And if you'll turn to the second page, you</p> <p>12 have U.S. Copyrights. Do you see that notation?</p> <p>13 A. Yes, sir.</p> <p>14 Q. And the first one is "Damage Prevention Near</p> <p>15 Pipelines," correct?</p> <p>16 A. Yes, sir.</p> <p>17 Q. Tell the Hearing Officer what that amounted</p> <p>18 to.</p> <p>19 A. That was a little cookbook -- I need to</p> <p>20 start back a little further. We were working for</p> <p>21 Magellan Pipelines which used to be Williams</p> <p>22 Pipelines. They have big pipelines that go through</p> <p>23 Kansas and Missouri for gas transmission. And they</p> <p>24 were under the gun to get a blasting regulation going</p> <p>25 in place, and nobody knew anything about it, but</p>

1 there was a big -- beginning a big push for
 2 intrastate and federal regulations to control the
 3 blasting around gas pipelines, oil, because of
 4 accidents that had occurred. And so I gave them --
 5 for our company I gave them a little cookbook thing
 6 of questions they could ask of the contractors that
 7 was doing the work so that they could have some more
 8 protection that what they were doing wasn't going to
 9 blow up the line. And it was two pages, a little
 10 cookbook thing. And at that time I was doing a lot
 11 of things like that and decided to have control of it
 12 so that other people just couldn't take it and use
 13 it, so I copyrighted it.

14 Q. Was that a blast plan --

15 A. No.

16 Q. -- in your mind?

17 A. No, it wasn't. It was a blast alert.

18 Q. Just like a primer that laypersons could use
 19 to be aware of problems that might arise during
 20 blasting?

21 A. Yes, sir.

22 Q. Have you ever written a blast plan for a
 23 quarry or another type of construction project where
 24 someone else was going to be doing the blasting?

25 A. Most all of them are that way, yes, sir.

1 Q. So you don't have a problem with a company
 2 like yours writing a blast plan when the blasting is
 3 going to be done by another party, do you, sir?

4 A. Well, I have a problem -- maybe it should be
 5 a concern, but -- so we can call it a problem -- that
 6 there has to be a lot of trust with who that company
 7 is that they're going to do what you tell them. And
 8 in that case, yes.

9 Q. That's in every case when you write a blast
 10 plan for someone, a third party that's going to be
 11 doing the blasting, isn't it, sir?

12 A. Well, we only write them for people that we
 13 can trust.

14 Q. Well, you learn to trust by working with
 15 them, correct?

16 A. Yes.

17 Q. Have you ever worked with Magruder?

18 A. No, sir.

19 Q. So you have no way of knowing whether
 20 Magruder is able to follow a blast plan, is able to
 21 implement a blast plan, is able to do the
 22 seismographic work should they so choose to do it, do
 23 you, sir?

24 MR. MAUER: Your Honor, this is the
 25 information I believe I tried to introduce, and Mr.

1 Brownlee objected and preclude it, and that's fine,
 2 but --

3 HEARING OFFICER: Mr. Mauer, I have
 4 yet to have a foundation laid that any of those
 5 reports related to the items just described by Mr.
 6 Brownlee.

7 MR. MAUER: Okay. Well --

8 HEARING OFFICER: There's simply no
 9 foundation that those federal reports relate to any
 10 one of those topics.

11 Q. (By Mr. Brownlee) I asked you specifically,
 12 you've never worked with Magruder, so you have no
 13 personal knowledge as to whether they're able to
 14 implement blast plans, conduct blasting, do
 15 seismographic work, any of that, do you, sir?

16 A. From that standpoint, that's correct.

17 Q. Have you ever permitted a quarry from the
 18 initial standpoint as opposed to an expansion?

19 A. Yes, two.

20 Q. And that's the O'Donnell site?

21 A. That's the revised one, and then there was
 22 two for Deffenbaugh Construction. But they were
 23 outside the frame of reference that you requested on
 24 what we supplied.

25 Q. And you have produced blast plans for

1 quarries, correct?

2 A. Yes, sir.

3 Q. And in your 44 years, have you ever
 4 testified in opposition to a quarry being
 5 constructed?

6 A. Yes, sir, I have.

7 Q. That was on Deffenbaugh, one of them,
 8 correct?

9 A. No. It was in Springfield, Missouri, and,
 10 again, it was outside the frame of need to be
 11 reported. And it was in karst topography. It was
 12 the quarry that was going to be trying to be
 13 reestablished right in almost downtown.

14 Q. Was that the Battlefield site for Journagan?

15 A. Yes, Journagan, yes. And that's who I had
 16 worked for.

17 Q. And you testified regarding -- so you were
 18 working for Journagan against the quarry? They were
 19 trying to open that quarry, sir.

20 A. Okay. Then they weren't, because we were in
 21 opposition to opening it.

22 Q. So do you know who you were working for?

23 A. I haven't been able to remember the
 24 attorneys that it was, no, sir.

25 Q. You've explained construction blasting

1 versus quarry blasting, correct?

2 A. I have, yes, sir.

3 Q. And regarding damage to a pipeline caused by
4 blasting, isn't it true in your 44 years of
5 experience with blasting and pipeline you have never
6 seen a pipeline damaged by blasting?

7 A. That's correct, yes, sir.

8 Q. And isn't it true that to create damage to a
9 pipeline that it would be through the movement of the
10 ground, that is, a permanent ground displacement
11 would be required to push, like, a rock into a
12 pipeline? Is that correct?

13 A. That's the most common one, yes, sir.

14 Q. And have you ever, ever in your 44 years
15 seen a pipeline damaged by vibrations caused by
16 blasting?

17 A. I don't think so.

18 Q. Okay. And I believe you testified to
19 Mr. Mauer that you've done, what, over 300
20 investigations for either quarries or contractors or
21 insurance companies for damage caused by blasting,
22 correct?

23 A. Mostly structures, yes, sir.

24 Q. And of those 300 investigations, how many
25 have you found that were caused by vibrations caused

1 by blasting to cause harm to a structure?

2 A. Only two.

3 Q. Two. And what kind of damage was caused?

4 A. Structural damage to windows and sheet rock.

5 Q. It was cosmetic damage basically to windows
6 not being able to open and sheet rock, was it not,
7 sir?

8 A. Well, there was structural movement of the
9 wood frame, and some of the frames needed to be
10 tightened back up, but that's what was broken.

11 Q. And in those two cases, the first was that
12 the actual location of the blast was 25 feet from
13 that house, wasn't it, sir?

14 A. Yes. It was close.

15 Q. And the other one was between 50 and
16 75 feet; is that not correct?

17 A. Yes. That's close.

18 Q. That is close, isn't it?

19 A. Yes.

20 MR. BROWNLEE: This would be
21 Applicant's...

22 HEARING OFFICER: Wait just a moment.
23 I'll try to help you out, Counsel.

24 MR. BROWNLEE: Sorry.

25 HEARING OFFICER: This would be

1 Applicant's 26. And this would be a list of blasting
2 projects. Whenever you're ready, Mr. Brownlee.

3 MR. BROWNLEE: Oh, I'm sorry.

4 Q. (By Mr. Brownlee) Mr. Dressler, I'm just
5 going to ask you a couple of these because I think
6 they're illustrative. Regarding the first one, which
7 looks like the O'Donnell -- it's the O'Donnell
8 quarry, is it not?

9 A. Yes, sir, in Olathe.

10 Q. And that's an expansion of an existing face
11 at that quarry, correct?

12 A. Yes, sir.

13 Q. And when you did that blast plan, were there
14 any special environmental concerns that you had in
15 working with that blast plan?

16 A. Yes, sir.

17 Q. And would you explain to the Hearing Officer
18 what that environmental concern was?

19 A. Environmental concern was possible collapse
20 or leakage caused to an earthen dam that was a big
21 reservoir area in Olathe, and the quarry came close
22 to it and there was dust issues and traffic issues
23 and noise issues.

24 Q. And that dam actually impounded the entire
25 water supply for the City of Olathe, Kansas, did it

1 not?

2 A. Not -- just let me help you on that
3 question. It wasn't the entire city, it's just part
4 of it, because they do have city water from Water 1,
5 but this is an adjunct to it. It's some of the
6 water.

7 Q. Well, supplied water to the City of Olathe?

8 A. Yeah. You got it.

9 Q. And when was this dam built?

10 A. 1931.

11 Q. And it was actually built with horse-drawn
12 wagons?

13 A. That's how it started out.

14 Q. And isn't it true that this dam is 500 feet
15 from the quarry face?

16 A. Yes, sir.

17 Q. And the face at this quarry is 50 feet, just
18 like Magruder, correct?

19 A. Well, I hadn't really tried to compare them,
20 but...

21 Q. In looking at the blast plan, are you not
22 familiar with the projected face as the quarry
23 proceeds is 50 feet?

24 A. Yes. Uh-huh.

25 Q. And the holes on this project were

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<p>1 3-and-a-half inches, compared to the 4 inches on the 2 Magruder site, correct? 3 A. Oh, okay. Yes, sir. 4 Q. And you projected that they'll be blasting 5 on this expansion, what, for ten years? 6 A. Thereabouts, yes, sir. 7 Q. And they're going to be blasting at least 8 once per day, correct? 9 A. Yes, sir. 10 Q. Over ten years, correct? 11 A. Yes, sir. 12 Q. And there's -- I believe you supplied this 13 blast plan for a third-party contractor, did you not, 14 sir? 15 A. Yes. 16 Q. And tell me who that was. 17 A. That was the part owner of Deffenbaugh 18 Construction who runs their quarry blasting 19 operation. They make -- have a quarry and they open 20 it up and they make rock and gravel for construction 21 purposes, and then Deffenbaugh fills up the void for 22 land reclamation where the aggregate's been taken 23 out. 24 Q. Have you worked with this third-party 25 contractor before?</p>	<p>1 A. Yes, sir. That's correct. 2 Q. That's a standard statement that people that 3 draft blast plans would -- if they're smart would 4 always put, correct? 5 A. Well, thank you. Yes, sir, that's correct. 6 Q. And you always do that, do you not, sir? 7 A. Yes, sir. 8 Q. And are you aware that that's exactly what 9 is included in the Magruder blast plan, that as they 10 encounter conditions at the site, they could amend 11 and change the blast plan? 12 A. I saw that, yes, sir. 13 Q. Well, do you think Dr. Worsey was incorrect 14 in putting that in his blast plan? 15 A. No, sir. 16 Q. Isn't that tacit recognition that as you're 17 on the site and you encounter different types of soil 18 or different types of rock or different types of 19 conditions, that's what the person designing the 20 blast plan wants, the ability to make those changes, 21 correct? 22 A. Yes, but not exactly yes, because the blast 23 plan that was presented was by Magruder and Dr. 24 Worsey, and it's open if the adjustments would be 25 made and how -- if they would be made and why. And</p>
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<p>1 A. Extensively, yes, sir. 2 Q. Did you do any investigation on the 3 licensing they hold? 4 A. At one time we did, yes, but I really didn't 5 check any of it for the Cedar Creek job, it was 6 called, because they're so eminently qualified. 7 Q. Did you project any blasting problems based 8 upon the risk of blasting within 500 feet of this 9 dam? 10 A. No, sir. That's the reason I set the 11 distance like I did. 12 Q. Now, turn, if you would, to the project 13 which I think you've described briefly to Mr. Mauer 14 on the 2007 Kansas City Plaza project. Is that the 15 second one? 16 A. Oh, yes. Okay. Yes, sir. Uh-huh. 17 Q. And I believe that, again, you testified was 18 a revised blasting plan due to a fly rock problem 19 that somebody created, correct? 20 A. Yes, sir. 21 Q. And in all of the blasting plans that we 22 reviewed yesterday, isn't it true that you always 23 state that the blast plan in terms of charge and 24 other things can be -- may be revised due to 25 conditions that we encounter at the site?</p>	<p>1 so there was a joint effort there on that issue. And 2 it's fine to put that in. I don't have any problem 3 with it. 4 Q. Well, in this blast plan or this blasting 5 project, it was literally on the Plaza, was it not? 6 A. It was within the Plaza, yes, sir. 7 Q. And it was requiring a 125-foot-deep cut 8 through solid rock, did it not? 9 A. Yes, sir. 10 Q. That extended over a city block, correct? 11 A. Roughly 400 feet, yes, sir. 12 Q. And surrounding that project were at least 13 three 20-story brick buildings, apartments, numerous 14 utilities, including water, sewer and data systems, 15 correct? 16 A. Yes, sir. 17 Q. And do you know how much total rock was 18 going to be removed on this project? 19 A. I know, but I can't remember because that 20 was Kidwell's job to haul it all out, but I just 21 can't recall it at this time. A lot. 22 Q. Well, let's focus on the sewer plant. Is it 23 not correct that there was a sewer line -- I'm sorry, 24 plant -- sewer line that ran perpendicular to this 25 entire block where you were blasting?</p>

<p style="text-align: right;">Page 166</p> <p>1 A. Oh. Yes, there was. I'm... Okay. Yes, 2 there was. 3 Q. And it was, as I think you stated, very old 4 cast iron, correct? 5 A. Yes, sir. 6 Q. And it was buried from 20 to 40 inches deep, 7 or was it 20 to 40 feet deep? 8 A. Feet, sir. 9 Q. 20 to 40 feet deep. And it was 24-inch 10 diameter, correct? 11 A. Yes, sir. 12 Q. And when you said very old, are we older 13 than let's say 1986 or... 14 A. No. I believe it was put in in about 1945. 15 Q. So World War II. It was that old? 16 A. Yes, sir. 17 Q. And there was also an 8-inch water line; is 18 that correct? 19 A. Yes, sir. 20 Q. And it was a flanged non-welded pipe, 21 correct? 22 A. That's correct. 23 Q. So that means there were joints. How many 24 feet on the water line? 25 A. I didn't measure that.</p>	<p style="text-align: right;">Page 168</p> <p>1 A. Well, yes, sir, that's correct. 2 Q. That's correct, isn't it, sir? 3 A. Yes. 4 Q. And throughout that eight months of blasting 5 125 feet deep, did you ever encounter any problem in 6 blasting next to those two lines? 7 A. No, sir. 8 Q. And did you -- was there a third-party 9 blaster utilized here, or did Mr. Dressler's company 10 do that? 11 A. To start with it was third-party blasting, 12 and then the second part of it after the accident 13 that occurred there was a different third party, but 14 we were in control of the blasting and inspected 15 everything. 16 Q. You inspected it afterwards. What do you 17 mean you were in control of the blasting? 18 A. They didn't do anything unless it was okay 19 with us. 20 Q. And that was in terms of did you supervise 21 the loading of the charges? 22 A. Yes, sir. 23 Q. And did you supervise detonation of the 24 charges? 25 A. Yes, sir.</p>
<p style="text-align: right;">Page 167</p> <p>1 Q. You didn't measure it? 2 A. No. 3 Q. You mean it wasn't important to know the 4 joints on that line? 5 A. You could see the joints and you knew there 6 were joints there, but no, sir, I didn't measure it. 7 Q. So did you expose that line? 8 A. Yes, sir. 9 Q. And you exposed the sewer line, correct? 10 A. Yes, sir. 11 Q. And then you -- what were the precautions 12 you took to prevent blasting along this 125-foot-deep 13 channel that you ended up doing? What precautions 14 did you take for those lines? 15 A. Okay. We braced them substantially after 16 they'd been excavated and then put a buffer around 17 and then a wood retaining wall to intercept any 18 vibrations that could be coming from the side or from 19 above and restrained it totally with a wooden 20 retaining wall that remained part of the structure 21 after it got built. 22 Q. And isn't it true that after you put the 23 wood retaining wall and the other materials you 24 testified to, you were still blasting within 10 feet 25 of both that water line and the sewer line?</p>	<p style="text-align: right;">Page 169</p> <p>1 Q. And you did any stemming that would be 2 required or decking? 3 A. We didn't do it. We observed it and 4 inspected and made sure that it was done correctly. 5 Q. And had you ever done that before as your 6 company? 7 A. Not usually we don't. 8 Q. Thank you. And let me ask you, in this 9 blast plan at this project I've looked up, there's 10 no -- absolutely nothing in your blast plan that 11 considers the effect on any of the surrounding 12 buildings in the middle of the Plaza, is there, sir? 13 A. I don't know how you can say that. 14 Q. Does it discuss the construction of those 15 buildings that surround this blast site? 16 A. No, it doesn't. 17 Q. Just like the Magruder -- just like 18 Magruder; it doesn't discuss the construction of the 19 sewer plant, does it, sir? 20 A. No, it doesn't, because it's not necessary 21 because the seismic vibrations that those can safely 22 withstand has already been established in the city 23 ordinances and what-all. And it was kept below 24 1 inch peak particle velocity. 25 Q. So you're testifying that just because</p>

1 there's a standard, as Mr. Mauer calls it, the speed
2 limit sign, just because there's a standard, that in
3 itself was going to prevent damage to those
4 buildings. Is that your testimony?

5 A. No, it isn't, because that standard
6 represents what those buildings are. And they're
7 very typical brick, concrete -- reinforced concrete
8 construction. They are what they are, and you know
9 what it is, and as long as the peak particle velocity
10 is kept below 1 inch for that type of structure,
11 there's no problem.

12 Q. And it's standard buildings, just like the
13 sewer plant you testified, it's just an ordinary old
14 sewer plant, correct?

15 A. No, they were not like the sewer plant.
16 They were very dissimilar to the sewer plant.

17 Q. But you're saying a peak particle velocity
18 of less than 1 will have no effect on buildings such
19 as that, correct?

20 A. That's what I said, yes, sir.

21 Q. And do you know whether the peak particle
22 velocity is included for buildings in the Missouri
23 Blasting Safety Act?

24 A. Not exactly.

25 Q. You don't know that, correct?

1 A. No. I read it several times, and I don't
2 think it stated exactly.

3 Q. Is it 2.0 IPS?

4 A. No. It's -- that's what the reference book
5 is, but I believe it's at 1.0.

6 Q. You believe that's what the Missouri
7 Blasting Safety Act says?

8 A. That's what I recall.

9 Q. Well, we'll clear that up on a break.

10 A. Okay.

11 Q. And, again, there was no damage to the
12 pipes, is that correct, over this blasting?

13 A. That's right. No leaks, no problems,
14 nowhere.

15 Q. Now, I believe there's another one, if we
16 could. And turn -- I think is there a 2007 Topeka
17 Quarry for Mid-State Materials?

18 A. Yes. Yes, there is.

19 Q. Is that on Exhibit 26?

20 A. Yes, sir, third item.

21 Q. And tell me what that project involved.

22 A. That was a job in a quarry where they were
23 wanting to expand it, and Williams Pipeline had a
24 pipeline through a portion of it and they were
25 wanting to get more rock out and we worked with

1 Mid-States' blasters and came up with a blasting plan
2 that conformed to the operational plan that Williams
3 Pipeline has, because they were wanting to get close
4 to their -- and within their easement. And they have
5 a 1,000-foot easement for -- on this one.

6 Q. And I believe you testified the blasting
7 would be between 300 and 4 feet from the pipeline,
8 correct?

9 A. Yes, sir.

10 Q. And I'll ask you, just off the start, how
11 long a project was this going to be?

12 A. It only lasted about a month.

13 Q. For the quarry?

14 A. No. To cut the line through to do the
15 blasting. The actual blasting for it was only about
16 a month long.

17 Q. And when you were blasting near this
18 pipeline, were you aware -- it was a welded steel
19 pipeline, correct?

20 A. Yes, sir.

21 Q. So it would have had no joints?

22 A. Well, there's joints, but they're welded,
23 yes, sir.

24 Q. Did you examine this pipeline that you were
25 working next to?

1 A. In this case, no. We used historical -- and
2 they're very good and accurate -- records that
3 Williams maintains on all their pipelines, the age,
4 the strength, what kind, what the operating pressure
5 is and all that.

6 Q. Well, let me ask you some of the same
7 questions that Mr. McGovern asked about your
8 knowledge of these pipelines on the Magruder
9 property. So if you didn't examine them, tell me, do
10 you know about the corrosion on those lines?

11 A. No, sir, but they do. Williams --

12 Q. Well, okay. I'm asking you, sir, that
13 planned this plan. Do you know about the --

14 A. Well, wait a minute. I'm trying to tell
15 you. And those -- what is reported by them is in the
16 research paper that is given to us, and that's --
17 because they run a pig through those and they
18 monitor, and it's kept records of it. This is for --
19 this is a federal regulation.

20 Q. Did that report contain any information on
21 fatigue of those lines?

22 A. Not on fatigue.

23 Q. Did it have any information on ground
24 fractures that might lie under that line?

25 A. No.

1 Q. Did it have any information on that line as
2 to degree of deflection that might exist of those
3 underground buried lines?

4 A. There was none reported on this one, but
5 yes, it is known, as the pig goes through, it radios
6 back the information, and so that would have shown,
7 and there was none on this one.

8 Q. If it would have been significant, it would
9 have shown as the pig went through, correct?

10 A. Yes. There was none.

11 Q. And the significance in the interstate
12 pipeline industry is 10 percent or greater, is it
13 not, sir?

14 A. That's pretty good, yes.

15 Q. Thank you. So what about the compaction
16 status of the materials around the line? There was
17 nothing that you knew about that, did you, sir?

18 A. That's correct.

19 Q. And about the backfill. You totally relied
20 on what they supplied you to know about the backfill,
21 correct?

22 A. Yes, sir.

23 Q. But you don't know whether the contractor
24 actually supplied you with that because you didn't
25 dig the line up, did you, sir?

1 A. That's correct.

2 Q. And the same thing for the bedding. You
3 totally relied on what they supplied you, the
4 as-builts, and you didn't dig it up, so you have no
5 idea about the bedding, do you, sir? I mean the --
6 yeah.

7 A. Well, I have an idea because they reported
8 it, but I didn't see it for myself to know. Yes,
9 that is correct.

10 Q. And do you know whether there might be any
11 voids under any part of that line less than
12 10 percent?

13 A. No, sir.

14 Q. What about compaction density? Do you have
15 any personal knowledge since you didn't dig it up as
16 to the compaction density of those lines?

17 A. No, sir.

18 Q. Do you have any information as to whether
19 there might be any blocks or rocks against that line?

20 A. No, sir.

21 Q. And do you have any information finally as
22 to whether there might be any subsurface water or
23 stream that could be around or affecting those lines?

24 A. That was looked at from the quarry side, and
25 none was observed.

1 Q. And isn't it true that the best way that a
2 person is going to blast around a pipeline, the best
3 way you can learn about the conditions, is you do an
4 excavation? Isn't that correct?

5 A. That's a way to know for sure.

6 Q. That's the best way, isn't it, sir?

7 A. Yes, but you don't want to do it unless it's
8 absolutely certain, because sometimes you can do as
9 much damage opening it up to check it as can be, too.

10 Q. Well, isn't it true that yesterday I asked
11 you, I said, it's more dangerous to do excavation
12 around pipelines than to blast around them, and you
13 agreed with me, did you?

14 A. Yes, sir. I thought I was there, too.

15 Q. And you agree with me today, don't you, sir?

16 A. Yes, sir.

17 Q. Let's turn, if we could, to the use of
18 seismographs. Isn't it true that in, I believe all
19 of your blast plans and your quarry work, you require
20 that seismographs be utilized when any blaster -- in
21 fact, I think during the operations you always have
22 seismographs, correct?

23 A. Yes, sir.

24 Q. And those are multiple in nature, in most
25 cases next to the nearest structure or anything like

1 a pipeline that might be of some concern to a
2 blaster, correct?

3 A. Yes, sir.

4 Q. And isn't it true that a seismograph, while
5 will not prevent damage, it will give you the best
6 indication of any vibrations or ground movement that
7 might approach a line or a structure in terms of
8 ascertaining whether the vibration levels have a
9 potential to cause damage? The seismograph is the
10 best way to determine that, isn't it?

11 A. Yes, sir.

12 Q. And isn't that exactly what is proposed on
13 the Magruder site in terms of using seismographs?

14 A. I don't know. One seismograph was
15 mentioned, and that was about it. I don't know if
16 anybody's going to pay any attention to it, but it
17 was mentioned, yes, sir.

18 Q. What do you mean no one's going to pay any
19 attention to that? Where do you get any information
20 that Magruder's people that are operating quarries
21 all over this state wouldn't pay attention to
22 seismographs? Do you have any basis to give that
23 opinion today based in fact?

24 A. Yes, sir, but that has already been excluded
25 that we can testify on, and it's from what went on in

1 Sunrise Beach.

2 Q. Oh, you think there's -- well, do you know
3 if Sunrise Beach has ever had a notice of violation
4 issued to Magruder's by the Missouri Department of
5 Natural Resources?

6 A. There's been complaints.

7 Q. Didn't ask you that. I asked you if there's
8 ever been a notice of violation.

9 A. I don't know.

10 Q. Well, let's talk about your knowledge of
11 Sunrise Beach. How long has Magruder operated that
12 site?

13 A. For quite awhile.

14 Q. Quite awhile?

15 A. Yes, sir.

16 Q. Would you be surprised as little as one
17 year?

18 A. Well, they've done a lot of problems.

19 Q. Well, if they've operated for one year, when
20 did the problems start down there, since you live
21 there?

22 A. Last year.

23 Q. Just last year?

24 A. Uh-huh.

25 Q. Since Magruder. That's your idea when the

1 problems were starting?

2 A. That's when it started opening up across the
3 road on the right-hand side as you're going towards
4 Camdenton.

5 Q. What about use of videos on blasting
6 operations? Does your company do that?

7 A. We do if asked, yes, sir.

8 Q. Only if asked, correct? Do you know what
9 the Magruder plan is to use videos?

10 A. No, sir.

11 Q. You don't know that?

12 A. Huh-uh. No, sir, I don't.

13 Q. Do you think that a special condition could
14 be set in a permit that would require seismographic
15 use just like you do, require videos just like you
16 do?

17 A. All that I can respond to is what was in the
18 plan that was submitted, not what should be. And if
19 you want that, I don't think I'm going to tell you
20 what should be, because that's their job to produce
21 that.

22 Q. Okay. And regarding this issue of the
23 knowledge of the actual pipes involved in RI 9523,
24 you do consider that to be a learned treatise,
25 correct?

1 A. Asked, answered many times. Yes, sir.

2 Q. I understand. And you know that the
3 Magruder experts rely on that document, too, do you
4 not, sir?

5 A. Yes, sir.

6 Q. And do you understand there's just a central
7 difference of opinion as to what effect blasting
8 vibrations might cause on those lines that they have
9 that's different from yours, correct?

10 A. I don't even know if they recognize the
11 lines.

12 Q. So you're saying that Dr. Worsey who has a
13 Ph.D. in blasting, you know more about that subject
14 than he does, even though you've never had any formal
15 training in it or education?

16 MR. MAUER: Well, I'm going to
17 object. I don't think Dr. Worsey testified he had a
18 Ph.D. in blasting.

19 HEARING OFFICER: I don't recall it's
20 a Ph.D. in blasting, but if you want to rephrase,
21 it's understood that he has a doctorate.

22 MR. DRESSLER: He has a Ph.D., and
23 it's in mining.

24 Q. (By Mr. Brownlee) Mining. And you think
25 that includes blasting?

1 A. That's an important part of mining, yes,
2 sir. That's what's taught.

3 Q. And is it your understanding that if you
4 have a buried pipeline and there's vibrations that
5 come along, that as the soil around the pipeline
6 moves the pipeline itself moves, so long as you're
7 not in a ground disturbance zone?

8 A. I don't know what you mean by ground --

9 Q. Well, is the vibration -- let me rephrase.

10 A. A void underneath it?

11 Q. No, I'm not talking about voids. As a
12 vibration reaches a pipeline from blasting, do you
13 understand that the soil moves adjacent to the
14 pipeline?

15 A. Yes, it does.

16 Q. And then the pipeline also moves, correct?

17 A. It responds to that, yes.

18 Q. And that vibration, does that then -- does
19 that soil return to where it was and the pipeline
20 return to where it was at a distance -- a sufficient
21 distance not to cause permanent ground displacement?

22 A. Soil doesn't work like steel pipes do, and
23 steel will return to its -- if it hasn't been past
24 its stress point, it will return, but the soil
25 doesn't. It does not have any elastic materials in

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<p>1 it.</p> <p>2 Q. What about the ductile iron? Would it</p> <p>3 return also?</p> <p>4 A. Ductile iron is a different story. Its</p> <p>5 shape stays pretty much the same all the time because</p> <p>6 its life design is for corrosion and strength, not</p> <p>7 flexure.</p> <p>8 Q. Well, ductile --</p> <p>9 A. And that's how it's different than the steel</p> <p>10 pipe that's used in oil transmission lines.</p> <p>11 Q. And then, of course, you said PVC has a lot</p> <p>12 of flexion ability, correct?</p> <p>13 A. Yes.</p> <p>14 Q. So it returns to its original position,</p> <p>15 correct?</p> <p>16 A. Yes, it does.</p> <p>17 Q. And the amount of movement from this</p> <p>18 vibration, I believe there's been testimony that it's</p> <p>19 no more than the thickness of a piece of paper.</p> <p>20 Would you agree with that?</p> <p>21 A. No, I wouldn't. It's small, but a lot</p> <p>22 depends on how much vibration goes on and how much it</p> <p>23 moves. You put out a quarry-sized blast, and it may</p> <p>24 move more than that.</p> <p>25 Q. Well, of course, we don't know what a quarry</p>	<p>1 it doesn't even address blasting over there. You're</p> <p>2 aware of that, aren't you?</p> <p>3 A. I sure am, and that's what I've been</p> <p>4 reporting and telling you is wrong.</p> <p>5 Q. And don't you --</p> <p>6 A. I'm sorry. I'm still talking. Do I get a</p> <p>7 chance to complete my statement?</p> <p>8 Q. Sure. I'm sorry.</p> <p>9 A. Thank you. That's what I've been trying to</p> <p>10 say. It isn't complete enough to address what's</p> <p>11 going to be happening.</p> <p>12 Q. Well, don't you think when they get ready in</p> <p>13 40 years to move across the line if they so choose</p> <p>14 and move across the creek and go over and blast in</p> <p>15 another area that they would file another blast plan</p> <p>16 and do an evaluation at that time based upon what</p> <p>17 they determine at the site? Isn't that what you</p> <p>18 would do?</p> <p>19 A. I can tell you what happens in the real</p> <p>20 world.</p> <p>21 Q. I asked you a question. You can come back</p> <p>22 and explain to Mr. Maurer.</p> <p>23 A. All right. You're asking if I'm the</p> <p>24 operator of that mine, what would I do if I had mined</p> <p>25 out section A? That's what I heard.</p>
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<p>1 size blast is. What about the blast amounts</p> <p>2 specified in the Magruder blast plan?</p> <p>3 A. That's what I was referring to.</p> <p>4 Q. And you think -- what are those?</p> <p>5 A. I'd have to look it up from a blast plan.</p> <p>6 It's several pounds. It's fairly large. I just</p> <p>7 don't immediately recall what that amount is.</p> <p>8 Q. Do you think it's -- it's fairly large; is</p> <p>9 that correct?</p> <p>10 A. Yes, sir.</p> <p>11 Q. Well, you consider this quarry to be a large</p> <p>12 quarry, don't you, sir, in terms of overall, over the</p> <p>13 100 years?</p> <p>14 A. Well, yes, I do.</p> <p>15 Q. What about where it's going to start in A, B</p> <p>16 and C zones where it will produce approximately</p> <p>17 300,000 tons a year? Do you consider that to be a</p> <p>18 large quarry?</p> <p>19 A. Not really.</p> <p>20 Q. Okay. It's a small quarry, isn't it?</p> <p>21 A. For that piece, but that's not what we're</p> <p>22 talking about. We're talking about 200 acres that</p> <p>23 span a very important sewage transmission line.</p> <p>24 Q. But you understand, the blast plan that you</p> <p>25 criticize and over what's going on on the west side,</p>	<p>1 Q. Correct.</p> <p>2 A. Okay. No, I wouldn't go back and get</p> <p>3 another blast plan or do anything else. I'd just go</p> <p>4 ahead and keep on doing what I've been scheduled to</p> <p>5 do, unless it's broken -- unless my permit is broken</p> <p>6 into sections for that and then you do this. That's</p> <p>7 how come we're doing that Larry O'Donnell quarry in</p> <p>8 three slices is because that's how it was permitted.</p> <p>9 How this is being permitted is the whole taco, and an</p> <p>10 operator is not going to go back and go through all</p> <p>11 this to get another blasting permit.</p> <p>12 Q. I agree with that. And that's why they</p> <p>13 permitted the whole thing, so they don't have to go</p> <p>14 through this, but that doesn't prevent them from</p> <p>15 re-filing a new blast plan or re-evaluating as they</p> <p>16 move to different parts of the permitted area?</p> <p>17 MR. MAUER: Well, I'm going to object</p> <p>18 to the question because it's a compound question. He</p> <p>19 said re-filing and re-evaluating.</p> <p>20 HEARING OFFICER: Clean up your</p> <p>21 compound question, Counsel.</p> <p>22 Q. (By Mr. Brownlee) Do you understand how</p> <p>23 much of this project right now is bonded?</p> <p>24 A. No, I don't.</p> <p>25 Q. Do you understand the significance of that?</p>

47 (Pages 182 to 185)

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<p>1 A. Well, I understand bonds, but what do you 2 mean by significance? 3 Q. Of why you would only bond a certain amount 4 in a quarry permit? 5 A. Well, yes. Less money. 6 Q. That's exactly right. 7 A. I understand it. 8 Q. Now, if you were a prudent design -- an 9 engineer designing blasting in an area 200-plus 10 acres, in 40 years when you decided to go to another 11 portion, wouldn't you at that time re-evaluate your 12 blast plan depending on what the conditions might be 13 2,000 yards away on the complete opposite side of 250 14 acres? 15 A. I really couldn't answer that, because now 16 I'm the engineer rather than the owner; is that 17 correct? 18 Q. Well, you're the advising engineer for the 19 owner. You'd want to re-evaluate your blast plan as 20 you moved a quarter mile away, wouldn't you? 21 A. Well, yes, if I'm the engineer. 22 Q. And, in fact, your blast plans allow 23 revisions and changes as you encounter the first 24 site. That is, you always say, we reserve the right 25 to change the blast plan based upon what we encounter</p>	<p>1 A. No, they're not mentioned. 2 Q. They're not mentioned, are they? 3 A. Right. 4 Q. And the word structure is not defined in the 5 Missouri Blasting Safety Act, is it, sir? 6 A. I don't think so. 7 Q. So you're saying that the pipelines are 8 structures under the Missouri Blasting Safety Act 9 even though they're not included anywhere in the Act, 10 and, further, the word structure is not defined 11 anywhere in the Act, is it, sir? 12 A. Is your point, then, that there's nothing 13 that's gone -- takes away structures -- 14 Q. My point is what the Act says. 15 A. The Act does not define what an unoccupied 16 structure is, that is correct. 17 Q. The Act doesn't include underground 18 utilities or water wells as uncontrolled structures, 19 does it, sir? 20 A. You mean that they're listed out 21 specifically? 22 Q. That's right, along with the other things 23 that are listed. They're not listed, are they? 24 A. No, they're not listed. 25 Q. And the word structure that you want to use</p>
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<p>1 at the site. You always say that, don't you, sir? 2 A. Yes. 3 Q. And that would be the same if the quarry is 4 going to last a year. You always say that, correct? 5 A. Yes, sir. 6 Q. Now, if I could, I'd turn briefly to the 7 Missouri Blasting Safety Act. You're aware if you 8 utilize a seismograph it totally negates the 9 requirement that scale distance be calculated, 10 correct? 11 A. That's correct, yes, sir. 12 Q. And it's your opinion that the pipelines are 13 considered structures under the Missouri Blasting 14 Safety Act, correct? 15 A. Yes, sir. 16 Q. And that's because they're attached to the 17 sewer plant, correct? 18 A. Yes, sir. There was a definition that is 19 even more clear than that in the report that 20 clarifies it. If you'd like to read that, that will 21 be the answer that I give. 22 Q. Do you know whether water wells or 23 underground utilities are even mentioned as an 24 uncontrolled structure in the Missouri Blasting 25 Safety Act?</p>	<p>1 as being part of the Missouri Blasting Safety Act, 2 it's not included and defined in the Missouri 3 Blasting Safety Act, is it, sir? 4 A. No, it isn't. 5 Q. And, again, isn't it true that under the 6 Missouri Blasting Safety Act seismographs are used to 7 determine blasting as the most accurate way to know 8 peak particle velocity and the potential harm from 9 blasting? 10 A. Yes, sir. 11 Q. Let's talk a little bit before we get to 12 karst topography, how many times have you visited 13 this site, at least yesterday when I asked you the 14 question? 15 A. I've been out there probably three times for 16 different reasons, once to the site, two times to 17 meet with Nick Edelman, the City engineer. 18 Q. Well, yesterday you told me once, when you 19 walked around the site. 20 A. That was just for the site. 21 Q. Okay. 22 A. There have been other times I've been to the 23 City to pick up information, to get things, to ask 24 questions and to make requests. 25 Q. I'm not talking about how often you went to</p>

1 City Hall. I'm talking about how many times you went
2 to the site.

3 A. Okay. Once.

4 Q. Once. How long were you there in terms of
5 the walk-around that you took?

6 A. Probably four hours.

7 Q. You told me yesterday you were there an hour
8 and a half.

9 A. Well, there's travel time to get here, which
10 is a half hour and a half hour back, and best I can
11 remember it was quite awhile. It's a big walk.

12 Q. And were you accompanied by anyone?

13 A. No, sir.

14 Q. And did you go inside the sewer plant and
15 visit it?

16 A. No. I observed it from the outside.

17 Q. So you observed it from the outside. So you
18 weren't able to determine -- of all the questions
19 that we've been asked here about what we know about
20 the plant, did you make any independent investigation
21 into any way that plant was constructed, from your
22 observations?

23 A. When I visited with Nick I did, yes, sir.

24 Q. I didn't ask you that. I asked, from your
25 observations, did you make any independent

1 determination as to anything inside that plant?

2 A. No. I don't think I did, because it's like
3 we do them all, and they're pretty much the same.

4 Q. That sewer plant is pretty much the same as
5 the rest of them, isn't it, sir?

6 A. Yes, sir. It's very typical.

7 Q. 12-inch concrete walls, rebar, correct?

8 A. You've got it.

9 Q. Did you look at the electric system?

10 A. I didn't go inside.

11 Q. So you couldn't -- didn't even check that
12 out, did you, sir?

13 A. No, sir.

14 Q. Did you look at any of the pumps and the
15 dials and the various things that you are asked
16 about? Did you check any of those things out?

17 A. No, sir. I'm very familiar with them, and I
18 don't need to.

19 Q. Now, regarding the actual blast plan that
20 Magruder filed regarding the 28 and the 18-inch
21 lines, you're aware that where blasting will start is
22 in section A that's been demonstrated, are you not,
23 sir?

24 A. Yes, sir.

25 Q. And while I know that there's no state law

1 that says they have to start there, do you have any
2 reason to believe they wouldn't start there in terms
3 of the access to the hollow and the area that would
4 start?

5 A. No, sir, I don't.

6 Q. If you planned this, isn't that where you
7 would start?

8 A. Yes, sir.

9 Q. And I believe I asked you about blasting at
10 the start, and you said that it was so far away, the
11 first shots would have no significance on either the
12 pipelines or the sewer plant, correct?

13 A. Yes, sir.

14 Q. And how close do you have to get to where
15 they become significant?

16 A. I'd have to do an energy to case study with
17 a seismograph and some shots to get the scale
18 distance formula for the site, and then I could
19 answer that question.

20 Q. But wherever that is, that's where there is
21 at least one iota of vibration that hits those
22 pipelines and then zero tolerance is violated, isn't
23 it, sir?

24 A. Well, you see, I know from experience that
25 that's far enough away that there won't be any impact

1 for just that little piece on the lines or -- and --
2 because the wastewater treatment plant is much
3 further away than the lines are.

4 Q. I agree.

5 A. Okay. And so it can safely be done there,
6 but it's just based on my experience and that's all.

7 Q. So if you put a seismograph on that line,
8 pipeline, and you started blasting towards it, is it
9 your testimony that once one iota of vibration hits
10 that line at zero tolerance it's compromised?

11 A. Yes, sir. That's the rule.

12 Q. That's your statement, though, isn't it,
13 sir?

14 A. Well, it's also a request of the Joint Sewer
15 Board and the City.

16 Q. I understand.

17 A. And that's a very reasonable request.

18 Q. This is a request that in your 44 years,
19 though, you've never seen a pipeline damaged by
20 blasting, correct?

21 A. Well, I'm thinking about it. Yes. Yes,
22 sir.

23 Q. Okay. Now let's turn to this karst. You're
24 not a geologist, correct?

25 A. Asked and answered, and the answer is yes,

1 sir, that's correct.

2 Q. And I believe I asked you yesterday if when
3 you visited the site, did you observe any surface
4 signs of karst topography?

5 A. No, sir. There aren't any.

6 Q. There aren't any, are there, sir?

7 A. That's correct.

8 Q. And when you looked around the surrounding
9 area, did you go down to the plant and look at the
10 high wall at the APAC site? Did you see any sign of
11 karst topography in that limestone high wall?

12 A. No, sir.

13 Q. There were no voids, no caves, no gaps,
14 anything like that, is there, sir?

15 A. That's correct. It's 40 foot, I believe.

16 Q. And your opinion on this karst topography at
17 the Magruder site is because you've read a document
18 that says the Ozarks -- Missouri Ozarks have karst
19 topography. Isn't that a fair statement?

20 A. No, it isn't fair. It's partially correct.

21 Q. Well, I believe yesterday you produced --
22 and I'm referring, if you would, to -- I think it was
23 BP-7 or Deposition Exhibit 11, if you've got it. And
24 I'm on the third page, and I'll ask you to read --
25 yeah, you've got it there, sir. I don't need to...

1 A. All right. What page?

2 Q. Third.

3 A. Here it is. "The Ozarks of Missouri is a
4 karst region."

5 Q. Okay. "The Ozarks of Missouri is a karst
6 region." Now, does it say anything about Miller
7 County as the Ozarks of Missouri?

8 A. No. No, sir. And it sure doesn't list out
9 the address of the Magruder property.

10 Q. It doesn't even mention the Magruder site,
11 does it, sir?

12 A. No. As far as I know, the Magruder site is
13 in the Lake of the Ozarks.

14 Q. It's in the Ozarks of Missouri?

15 A. Yes.

16 Q. Well, let's ask you, you're not a geologist,
17 but how far do the Ozarks of Missouri go?

18 A. The part I know about from experience is
19 well over into Springfield. It's connected there.
20 And how far to the other direction, I really don't
21 know.

22 Q. So you think it maybe goes over towards
23 Hermann or New Haven, Missouri? Do you know where
24 those places are?

25 A. It could. I just haven't ever gotten into

1 it there.

2 Q. Well, maybe -- is it, like, everything south
3 of the Missouri River is the Ozarks of Missouri? You
4 just don't know?

5 A. I would want to look before I -- but I know
6 it's here because I live here.

7 Q. You rely on karst topography as being in the
8 Ozarks of Missouri, but you don't know what it is;
9 isn't that correct?

10 A. No, sir. I do know what it is.

11 Q. Well, tell me, then, what it is. What
12 counties or what area does it encompass?

13 A. Excuse me. You're asking where it is, if I
14 might help you with your sentence, rather than what
15 it is.

16 Q. Okay. Where is it?

17 A. Now, which do you want to know?

18 Q. Where. I'm sorry. That's a good
19 correction. Where is it?

20 A. Where is it?

21 Q. Uh-huh.

22 A. It's in Lake of the Ozarks. And I know it's
23 also in the Springfield, Missouri, area.

24 Q. And you're saying that this karst
25 topography, does it create special problems for the

1 quarry blasting and operation, or is it more of an
2 environmental issue for you?

3 A. Environmental issues should be a concern
4 with quarries.

5 Q. I understand. Well, let's talk about that.
6 You know, I've looked at your blast plans, I've
7 looked at this big document you did for O'Donnell --
8 and I'll show it to you in a minute. I've not seen
9 one word, one mention, of environmental concerns in
10 any of those documents that you prepared.

11 A. Well, then you must not know what you're
12 reading, sir.

13 Q. Well, let's take a look at them, then.

14 A. Okay. Look at the index.

15 Q. I'm going to hand you what we've marked -- I
16 believe it's Dressler Exhibit 4, which is the... You
17 want me to look at the index. Is there a section in
18 here on environmental in this entire document?

19 MR. DUGGAN: Well, Mr. Hearing
20 Officer, I request a short break.

21 HEARING OFFICER: I believe it would
22 be appropriate. We'll give the witness time to look
23 to see if there's a section on environmental impact.
24 Let's take a ten-minute break. Try to be back at
25 five 'til and resume. We are recessed and off the

<p style="text-align: right;">Page 198</p> <p>1 record.</p> <p>2 (Brief recess.)</p> <p>3 HEARING OFFICER: We're back on the</p> <p>4 record. Mr. Brownlee, you may resume your</p> <p>5 cross-examination. I believe Mr. Dressler is</p> <p>6 examining the document. You had asked concerning a</p> <p>7 section in there on environmental impact, I believe,</p> <p>8 and so if Mr. Dressler is ready to provide an</p> <p>9 answer...</p> <p>10 Q. (By Mr. Brownlee) Is there a specific</p> <p>11 section in there dealing with environmental impact?</p> <p>12 A. Yes, there is. There's only one. This was</p> <p>13 the first one that was made ten years ago, and the</p> <p>14 second one that I've given you is the one that has</p> <p>15 all the listing with more environmental, but this one</p> <p>16 only had set-back requirements and buffer zones for</p> <p>17 noise and dust. And it's listed here. But that's</p> <p>18 all that was done at that time for environmental</p> <p>19 issues.</p> <p>20 Q. Well, do you know whether the Land</p> <p>21 Reclamation Commission requires an environmental</p> <p>22 statement in this particular permit process?</p> <p>23 A. Yes, I do.</p> <p>24 Q. Does it?</p> <p>25 A. No, sir.</p>	<p style="text-align: right;">Page 200</p> <p>1 A. No, they aren't.</p> <p>2 Q. They don't have one, do they?</p> <p>3 A. No, sir.</p> <p>4 Q. Thank you. And let me finally, on this</p> <p>5 karst topography issue, I'm going to hand you again,</p> <p>6 which you've got, I believe, what is marked BP-8 or</p> <p>7 Deposition Exhibit 12. And if you'll turn to Page 10</p> <p>8 of that document.</p> <p>9 HEARING OFFICER: Numbered Page 10 as</p> <p>10 it appears in the article?</p> <p>11 MR. BROWNLEE: Yes.</p> <p>12 HEARING OFFICER: Okay. Thank you.</p> <p>13 Q. (By Mr. Brownlee) I don't mean to approach</p> <p>14 the witness, but I --</p> <p>15 HEARING OFFICER: That's fine. You</p> <p>16 may.</p> <p>17 A. Six, seven. It starts here.</p> <p>18 Q. (By Mr. Brownlee) No. I'm going to go to</p> <p>19 another section. I'll read the summary of the</p> <p>20 potential environmental impacts that this document</p> <p>21 addresses.</p> <p>22 A. Uh-huh.</p> <p>23 Q. Underneath the picture of this blast on Page</p> <p>24 10 there's a paragraph, and I'm going to read this to</p> <p>25 you and ask again, like Mr. McGovern did, if you</p>
<p style="text-align: right;">Page 199</p> <p>1 Q. So you're asking that -- the deficiency is</p> <p>2 on something that Missouri law doesn't even require.</p> <p>3 Is that a fair statement?</p> <p>4 A. Well, I don't know if it's fair or not,</p> <p>5 really.</p> <p>6 Q. What's the date of this document that we've</p> <p>7 marked as --</p> <p>8 A. Well, that's the first one. That's about</p> <p>9 ten years old.</p> <p>10 Q. Well, let's take a look at some more recent</p> <p>11 blast plans of yours.</p> <p>12 A. Well, yeah. Give me the other O'Donnell</p> <p>13 one. It's listed out in the index in a lot of them.</p> <p>14 Q. I don't even know if I have it, the most</p> <p>15 recent one.</p> <p>16 A. It was in my deposition.</p> <p>17 Q. That's the only one I think -- maybe your</p> <p>18 lawyer can find it. Well, let me ask you, if I had a</p> <p>19 blast plan in April of 2006 and June of 2007, one for</p> <p>20 a Payne and Brockway for a blast plan at the Blue</p> <p>21 River Johnson County project and the other one on the</p> <p>22 west edge of Kansas City addressed to Jim Caldwell</p> <p>23 Construction, do you know if either of those blast</p> <p>24 plans we looked at in the deposition yesterday have</p> <p>25 an environmental impact statement?</p>	<p style="text-align: right;">Page 201</p> <p>1 agree with this. You follow me along, please,</p> <p>2 Mr. Dressler.</p> <p>3 A. Sure.</p> <p>4 Q. "The technology of rock blasting is highly</p> <p>5 developed, and when blasting is properly conducted,</p> <p>6 most environmental impacts should be negligible. By</p> <p>7 following widely-recognized and well-documented</p> <p>8 limits on ground motion and air concussion, direct</p> <p>9 impacts from ground shaking and air concussion can be</p> <p>10 effectively mitigated. Those limits and methods to</p> <p>11 ensure them are discussed in," and then they cite</p> <p>12 some -- apparently some treatises. Do you agree with</p> <p>13 that statement?</p> <p>14 A. Yes, sir, I do.</p> <p>15 Q. And also, finally on karst, did you not work</p> <p>16 on a project, I believe with Journagan, in</p> <p>17 Springfield in the past dealing with blasting in a</p> <p>18 karst topography to preserve what would be called a</p> <p>19 show cave?</p> <p>20 A. Yes, I did.</p> <p>21 Q. And the blast plan that you devised was</p> <p>22 utilized on that project, was it not?</p> <p>23 A. Yes, it was.</p> <p>24 Q. And weren't they able to successfully blast</p> <p>25 on that project with absolutely no damage to a show</p>

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<p>1 cave in karst topography?</p> <p>2 A. Yes, sir.</p> <p>3 Q. Thank you. Now, regarding the environmental</p> <p>4 impact, since we're still there, I believe in your</p> <p>5 direct examination you said that the -- if there was</p> <p>6 a spill that there would be a cataclysmic</p> <p>7 environmental effect? Is that your statement?</p> <p>8 A. Yes, sir.</p> <p>9 Q. And then Mr. McGovern asked you questions if</p> <p>10 there was going to be a spill on this site that you'd</p> <p>11 have to get a vinyl basin to contain the spill; is</p> <p>12 that correct?</p> <p>13 A. If it was going into the quarry, yes.</p> <p>14 Q. Well, or what about somewhere else up in the</p> <p>15 city?</p> <p>16 A. Well, the only place -- where else in the</p> <p>17 city?</p> <p>18 Q. You could have a break anywhere along this</p> <p>19 sewer line, could you not?</p> <p>20 A. I was referring to breaks only on the</p> <p>21 Magruder property.</p> <p>22 Q. Well, do you think that a break --</p> <p>23 A. That's an address that you want me to stick</p> <p>24 with, so I am.</p> <p>25 Q. Well, do you think that you could have a</p>	<p>1 Q. What if a break occurred up in this area,</p> <p>2 let's say near the new, oh, the new Hy-Vee or up in</p> <p>3 that area? Would a break in those two lines up there</p> <p>4 have the potential to cause a cataclysmic</p> <p>5 environmental event?</p> <p>6 A. In some ways, yes. It would be more</p> <p>7 noticeable there, and a response would be quicker.</p> <p>8 MR. DRESSLER: Well, you're</p> <p>9 listening.</p> <p>10 HEARING OFFICER: I don't know that</p> <p>11 he wants any further response, but that's okay.</p> <p>12 MR. BROWNLEE: No. Go ahead. I can</p> <p>13 actually listen and do other things.</p> <p>14 A. The results would still be very, very</p> <p>15 severe, but it would be able to be noticed and action</p> <p>16 taken quicker to stop it than in the remote location</p> <p>17 that was on the Magruder property.</p> <p>18 Q. (By Mr. Brownlee) I believe this would be</p> <p>19 Applicant's Exhibit 27. Would you take a look at</p> <p>20 that page.</p> <p>21 HEARING OFFICER: Yes. This would be</p> <p>22 Applicant's 27, a letter of June 25th from</p> <p>23 Mr. Gatlin. You may proceed.</p> <p>24 Q. (By Mr. Brownlee) Make reference to the</p> <p>25 bywater bypass log. As an engineer, have you ever</p>
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<p>1 cataclysmic environmental effect if there was a break</p> <p>2 somewhere else on that ductile iron pipeline and the</p> <p>3 PVC line in the city of Osage Beach?</p> <p>4 A. Well, yes, it could.</p> <p>5 Q. And if you had a spill and a break in the</p> <p>6 line, wouldn't it cause the economic damage that you</p> <p>7 testified to?</p> <p>8 A. Well, it would have to be on the loop that</p> <p>9 serves all of Tan-Tar-A and comes up. That has the</p> <p>10 most people and businesses on it, I believe.</p> <p>11 Q. And is that loop, would that include</p> <p>12 anywhere from the time it crosses the Grand Glaize</p> <p>13 Bridge up until where it reaches the sewer plant?</p> <p>14 That's the loop we're talking about, aren't we?</p> <p>15 A. I don't think so. I was only looking at it</p> <p>16 from the Magruder property as it goes down towards</p> <p>17 Tan-Tar-A, and I don't think that's -- I'm still</p> <p>18 turned around. I've only lived here 15 years, and</p> <p>19 I'm still turned around. And I don't think that goes</p> <p>20 toward the Grand Glaize Bridge.</p> <p>21 Q. Well, what if a break occurs let's say --</p> <p>22 and I'll go up here to the map, if I can. And I'm</p> <p>23 addressing BP-22. Do you see where I'm indicating</p> <p>24 the Grand Glaize Bridge is?</p> <p>25 A. Yes.</p>	<p>1 seen a document like this? That would be the third</p> <p>2 page of the Exhibit 27. You've got it in your hand,</p> <p>3 sir.</p> <p>4 A. Oh. It's not labeled.</p> <p>5 Q. I'm sorry.</p> <p>6 A. Give me a moment. I don't need to read it,</p> <p>7 but I can tell you I've never seen it before.</p> <p>8 Q. Do you know whether, in fact, on May 21,</p> <p>9 2008, the ductile iron pipeline was fractured,</p> <p>10 releasing between 80 and 100,000 gallons of raw</p> <p>11 sewage in the Osage Beach area?</p> <p>12 A. Like I say, I don't know anything about</p> <p>13 that.</p> <p>14 Q. You know nothing about this, then?</p> <p>15 A. That's right. Correct.</p> <p>16 MR. BROWNLEE: I'd like to mark that,</p> <p>17 if I could. And I apologize for not having more</p> <p>18 copies. We can supply it. That would be Applicant's</p> <p>19 Exhibit 28. I think we do have copies.</p> <p>20 Q. (By Mr. Brownlee) Mr. Dressler, are you</p> <p>21 familiar with that document?</p> <p>22 A. That and more, yes, sir.</p> <p>23 Q. And, in fact, that is the Missouri DOT plan</p> <p>24 for the Highway 54 relocation, is it not?</p> <p>25 A. Yes, sir.</p>

1 Q. And yesterday when we examined this, you
2 testified that you, in fact, drafted exhibits and
3 documents like that; is that correct? Not this one,
4 but you have drafted them?

5 A. Yes, sir. That's part of civil engineering
6 design.

7 Q. And regarding the blast plan, are you
8 familiar -- and, again, from looking at this -- that
9 this blue line is the sewer lines that we're talking
10 about that run through the Magruder property?

11 MR. MAUER: I'm sorry. I don't
12 understand the question about regarding the blast
13 plan. I don't think there's any connection between
14 this map and the blast plan on the Magruder property.

15 HEARING OFFICER: I believe you need
16 to rephrase.

17 MR. BROWNLEE: I misspoke.

18 Q. (By Mr. Brownlee) Regarding the exhibit,
19 are you aware that the blue line is the same sewer
20 lines that ultimately run through the Magruder
21 property to the sewer plant?

22 A. They might be. I haven't looked at them
23 from that standpoint yet.

24 Q. Well, you're familiar with what a sewer line
25 or sewer main would look like on a Missouri DOT plan,

1 aren't you, sir?

2 A. That's not what I'm saying. I'm saying I
3 haven't made the connection yet with where that goes
4 and where it ties in to be able to answer the
5 question.

6 Q. Well, then we could call a rebuttal to get
7 it, but I'll go ahead. Do you have any doubt that
8 this plan that's represented by this exhibit is
9 the -- a portion of the Highway 54 relocation project
10 that goes through Osage Beach?

11 A. No, I don't. It's just where you were going
12 with it before wasn't where we are on anything, and
13 that's not the same lines that are on the Magruder
14 property. They go to the same place, but... Go
15 ahead.

16 HEARING OFFICER: Let the Hearing
17 Officer, so we don't get into a big issue here -- to
18 your knowledge, do these lines connect and ultimately
19 empty into the sewage plant through the Magruder --
20 the lines crossing the Magruder property.

21 MR. DRESSLER: I haven't traced that
22 out yet, but they do go to the wastewater treatment
23 plant.

24 HEARING OFFICER: Well, Mr. Dressler,
25 how in the world would they get there otherwise? Is

1 there another line that takes the Osage Beach sewage
2 to that plant?

3 MR. DRESSLER: Well, there's three
4 lines. There's one that runs from another direction
5 from the joining city.

6 HEARING OFFICER: Yes, sir.

7 MR. DRESSLER: And then there's two
8 lines that run from Tan-Tar-A up and over, and maybe
9 it is connected. I just haven't traced that out that
10 far yet. I've only looked at the lines on the
11 Magruder property to the sewage treatment plant.

12 MR. MCGOVERN: My recollection,
13 remember the Stockmans, actually a line runs by their
14 property, so it comes in from the RV park. It's the
15 third line Mr. Dressler is talking about.

16 HEARING OFFICER: Okay. The Hearing
17 Officer just wants to make sure that -- so there is a
18 third line that the sewage -- Osage Beach sewage goes
19 into the treatment plant?

20 MR. MAUER: There is a third line
21 running into the sewage treatment plant. It runs
22 along the river, up the Stockmans' property and is
23 pumped up the hill and comes in at the same point
24 coming into the sewage treatment plant, but there is
25 a third line, yes, sir.

1 MR. BROWNLEE: It's a smaller line
2 from the campground area down there.

3 HEARING OFFICER: Is that the Lake
4 Ozark line?

5 MR. BROWNLEE: Yes.

6 MR. MAUER: From Lake Ozark and --

7 HEARING OFFICER: All right. Because
8 the previous testimony was there was a Lake Ozark
9 line and there are two Osage Beach lines.

10 MR. BROWNLEE: Yes.

11 MR. MAUER: Yes.

12 HEARING OFFICER: All right. Very
13 good.

14 Q. (By Mr. Brownlee) And this is a section of
15 Highway 54 that goes through Osage Beach, is it not?

16 A. Yes.

17 Q. You've been hired, what, two or three days
18 ago to work on this project?

19 A. Yes, sir.

20 Q. And you're familiar with this document, are
21 you not?

22 A. Yes, sir. We're working on it in the office
23 right now.

24 Q. And you understand -- and if not you can
25 come up here -- that the blue line is the sewer

1 lines, is it not, sir?

2 A. Yes, sir.

3 Q. Now, the pink lines that are indicated, can
4 you tell the Hearing Examiner what those are?

5 A. No, not without going up and looking at how
6 they're identified. We talked about it yesterday.

7 MR. BROWNLEE: Well, let's mark
8 Exhibit 27 -- or 28.

9 MR. TROUTWINE: 29.

10 MR. BROWNLEE: What is it?

11 MR. TROUTWINE: 29.

12 HEARING OFFICER: This will be 29.
13 Help me out here. What is this supposed to depict?
14 Because 28 is our relocation map.

15 MR. BROWNLEE: Right. 29 is a cross
16 section. And I'll tie it up here in a minute.

17 HEARING OFFICER: All right.

18 Q. (By Mr. Brownlee) Mr. Dressler, do you
19 recognize what Exhibit 29 is?

20 A. Yes, sir. It's the construction drawings
21 that MODOT has provided to the general contractor and
22 that we're working off of in the very initial stages
23 to determine whether blasting or ripping will need to
24 be done, and then pre-blast surveys will follow that
25 and many other things.

1 Q. Now, I'll just -- let's make reference to
2 Station 65 on this which is referenced on the large
3 exhibit as well as Exhibit 29.

4 A. Okay.

5 Q. And what is Exhibit 29 as a cross section?

6 A. It's a cross section of the cut from the --
7 that is going to be made down to the 54 Bypass road.

8 Q. And the squares on Exhibit 29, isn't it true
9 those are 20-foot sections each or 20-foot
10 measurements?

11 A. 20-foot squares, yes, sir.

12 Q. Squares?

13 A. Yes, sir.

14 Q. And does it not indicate that at Section 65
15 there's going to have to be a cut to get down to
16 profile grade at Station 65?

17 A. Yes, sir.

18 Q. And how deep is that cut?

19 A. 20, 40, 60, 80 -- roughly 80 feet.

20 Q. So isn't it true that there will have to be
21 at Station 65 some 85 feet of material removed? Is
22 that correct?

23 A. Yes, sir.

24 Q. And the sewer lines that are indicated in
25 the blue line, are they indicated next to Station 85

1 in Exhibit 29?

2 A. Yes, sir.

3 Q. They're in, what, the yellow block?

4 A. Yes.

5 Q. Marked as, what, utility corridor?

6 A. Corridor, uh-huh.

7 Q. And how far are they from this excavation
8 that will have to be?

9 A. The first start or the lowest one?

10 Q. Well, the lowest one.

11 A. The lowest one? Okay. Roughly 85 feet.

12 Q. And from the first start from blasting, how
13 close is that point?

14 MR. MAUER: I'm going to object. He
15 said the first start from blasting. I don't think
16 there's been testimony that there's blasting there.

17 MR. DRESSLER: It's excavation.

18 Q. (By Mr. Brownlee) Okay. Excavation?

19 A. That's all I can answer because --

20 Q. Okay. That's fine.

21 A. -- it hasn't been determined yet.

22 MR. MAUER: Let him answer the
23 question.

24 A. It hasn't been determined yet that blasting
25 is going to be required to remove that rock.

1 Q. (By Mr. Brownlee) Have you examined -- on
2 this whole project, have you ever examined the
3 blasting permit issued by Osage Beach for this entire
4 project?

5 A. I've not examined it. I've been told that
6 it's already in place.

7 Q. Would you be able to recognize one if I
8 showed it to you?

9 A. I think so, yes, sir.

10 Q. I'm going to hand you what's been marked
11 Applicant's Exhibit 30 and ask if you can identify
12 that?

13 HEARING OFFICER: This is Applicant's
14 30, application for blasting permit.

15 MR. MCGOVERN: Is this a supplement
16 to the exhibit list, your Honor?

17 MR. BROWNLEE: Yeah. It's all going
18 to tie in.

19 Q. (By Mr. Brownlee) Would you take a look at
20 Exhibit 30, please.

21 A. Yes.

22 Q. What is that?

23 HEARING OFFICER: Wait just a moment.

24 MR. MCGOVERN: I didn't hear an
25 answer. I was asking, is this now an exhibit in

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<p>1 addition to those originally submitted in the witness 2 list that we all filed before the hearing started? 3 Is this now new? 4 HEARING OFFICER: Yes. Proceed. 5 Q. (By Mr. Brownlee) Do you recognize that 6 document, sir? 7 A. Yes. It's a blasting permit. We didn't 8 submit it, but it's a blasting permit with the City. 9 Q. And who does it indicate that the permit was 10 issued to? 11 A. Phillip Davis. He's called PJ. He's the 12 one that hired us. 13 Q. He hired you? 14 A. Uh-huh. 15 Q. And do you know how much -- if you take a 16 look at, I believe, the last page of the map, do you 17 know approximately how many cubic yards of rock this 18 permit was issued for? 19 A. No, sir. 20 Q. Is there a notation on the last page? Where 21 the map is. 22 A. Approximately 1,000 cubic yards of rock to 23 shoot. 24 Q. Isn't that a million cubic yards and -- 25 A. Yes, it is.</p>	<p>1 A. At the top? 2 Q. At the top. 3 A. Okay. Roughly 45 feet. 4 Q. And to make the excavation, you'd have to 5 use heavy equipment; is that not correct? 6 A. Yes, that's correct, very heavy equipment. 7 Q. Very heavy equipment. And it might 8 entail -- if there's rock encountered, it's either 9 through a lot of chipping or blasting; is that not 10 correct? 11 A. No, sir. Some of this can be ripped. 12 Q. But, again, if you're ripping, it's going to 13 take very heavy equipment, is it not? 14 A. Yes, sir. 15 Q. Now, blasting or ripping or chipping, will 16 not all of those activities create vibrations? 17 A. Well, yes, they do. 18 Q. And those vibrations will start at some 19 40 feet from these pipelines, correct? 20 A. Yes, they will. 21 Q. And those vibrations or whatever are going 22 to create an excess of your zero tolerance on this 23 pipeline, is it not, sir? 24 A. They may well be, yes. 25 Q. Well, can you have equipment or blasting or</p>
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<p>1 Q. And how many tons of rock would that equate 2 to? 3 A. Well, I'd have to have a calculator to 4 divide it by what a cubic yard of this rock weighs. 5 Q. Isn't it a multiplier of two, that is, 6 1 cubic yard of rock equals 2 tons? 7 A. Well, that's roughly. That could be used, 8 yes, sir. 9 Q. So going back to Exhibit 29, you stated that 10 excavation would be how far from the utility line, 11 whether it's blasting or chipping, right? 12 A. Yes, sir. 13 Q. Okay. How far does that start from the 14 utility lines? 15 A. On 65? 16 Q. Yeah, on Station 65. We're just using this 17 one as an example. 18 A. Okay. I've done that once, but you want it 19 again? 20 Q. Yeah. The excavation distance from the 21 sewer lines to where -- to the excavation start. 22 A. Roughly 85 feet. 23 Q. That's the depth. I'm talking about from 24 the utility corridor to where excavation would start 25 to make this cut.</p>	<p>1 ripping operating 40 feet from a pressurized pipeline 2 such as we have here without causing vibrations? 3 A. At this point I don't know how, but we're 4 going to figure out a way. And so yes, it will, if 5 the line is still in service... 6 Q. So you may have to move the line? Is that 7 what you're indicating? 8 A. Well, how can I tell you what I haven't done 9 yet? 10 Q. Well, I don't know. 11 A. Well, I don't know either. 12 Q. So moving the line is a solution, at least 13 potential? 14 A. I'm really not going to waste his time, 15 especially discussing how to do a construction 16 blasting job for here, except it will be handled 17 safely, and the zero tolerance, as long as I'm there, 18 is going to be followed. How is that? Is that good 19 enough? 20 Q. The word you just used was construction 21 blasting. So you're telling me you can blast -- 22 A. That's what this is. 23 Q. -- 40 feet from these lines without 24 vibration. Is that what you're telling us today? 25 A. No, I'm not telling you that at all. I'm</p>

1 telling you there will be safeguards or plans put
2 together so that there is no vibration to those
3 lines.

4 Q. Well, can that be done at the Magruder site
5 when they're going to be as far as 150 feet away?

6 A. Well, they -- no, it can't.

7 Q. Well, what's the difference, Mr. Dressler?

8 A. Because they haven't done everything that
9 they could do. That's what the -- that's what all of
10 this stuff is about, to provide protection. And I
11 don't know at this point on those lines because we
12 haven't even talked to the City or anybody as yet
13 about what's going to happen because we're trying to
14 find out where blasting is going to be done and so
15 you know what you're doing. And so it's way too
16 early to say, except I can assure you they'll be
17 protected to the same level that what was done on the
18 Magruder property.

19 Q. So you're telling us now that you believe
20 there is some solution that you can create and blast
21 within, what, 40-some feet of these lines and have
22 absolutely zero tolerance?

23 A. Yes, sir. And I've done it before.

24 Q. Well, I thought you told me before you'd
25 never had a project before that had zero tolerance

1 even involved.

2 A. Well, glass windows are close to zero
3 tolerance.

4 Q. And, in fact, this blasting is -- or rock
5 removal. You used blasting. It's throughout this
6 project where they have to cut down to profile grade,
7 do they not, sir?

8 MR. MAUER: Your Honor, I'm going to
9 object at this point because previously when I asked
10 this witness a hypothetical regarding the ability of
11 Magruder to carry out the plan, you sustained the
12 objection saying there was no basis for the
13 foundation that, in fact, they didn't have the
14 procedures in place. I think the witness has already
15 said this hypothetical, there's no information that
16 they're actually going to be blasting at any
17 particular spot, and therefore I think it's an
18 improper hypothetical and I would object. There's no
19 foundation that there's going to be blasting there.
20 It hasn't been decided yet.

21 MR. BROWNLEE: Well, he said once
22 it's blasting, ripping or chipping, and then he a
23 minute ago said it was blasting that would have to be
24 done.

25 MR. MAUER: No. I don't think he --

1 MR. BROWNLEE: Well, I think the
2 record will show that.

3 MR. MAUER: I don't think it will.

4 HEARING OFFICER: Madam Court
5 Reporter, will you read back to me -- and I'm not
6 sure, I apologize how far back you're going to have
7 to go. I need the witness' response relative to -- I
8 thought I heard blasting, ripping, etcetera, but I
9 need it off the record as far as his testimony of
10 what was going to happen.

11 MR. BROWNLEE: I think it was along
12 the lines if they could create a zero tolerance for
13 the blasting. I think it's in that area.

14 (Whereupon, the requested portion of
15 the record was read by the reporter as follows.)

16 HEARING OFFICER: Restate your
17 question, Mr. Brownlee.

18 MR. BROWNLEE: Well, where I was when
19 the objection was made, I was asking him does not
20 that rock removal occur literally throughout that
21 project that's demonstrated on that exhibit to get it
22 down to grade.

23 MR. MCGOVERN: I'm going to object as
24 to overbroad when he's saying throughout the project.
25 Clearly, it's not going to happen throughout the

1 project. If there's a limited area in which the
2 inquiry is directed to, I don't have an objection.

3 MR. BROWNLEE: Well, okay. Let me
4 try and rephrase.

5 HEARING OFFICER: All right. Try to
6 rephrase.

7 Q. (By Mr. Brownlee) Is there not -- at
8 station near 65 you've testified how deep is that
9 rock removal, or the removal of materials at that
10 point? You said 80-some feet?

11 A. Yeah. 85 feet, I recall.

12 Q. And do you want to just come up here a
13 little bit and maybe you can -- I'll just -- I tried
14 to do this as a general question. I don't think it's
15 specific to these, but do you want to come up and
16 look, Mr. Dressler, at Station 105? You don't have
17 it there in front of you. It will show here. We're
18 about done here. It looks like at around Station
19 105, between 100 and 105, there's going to have to be
20 substantial materials removed to get down to proof of
21 grade, correct?

22 A. Yes.

23 Q. Approximately 70-some feet, it looks like?

24 A. Well, I don't know the size of these
25 squares. They're different than the other ones?

1 They're cut off.

2 Q. Well, this one is 80 and this one is about
3 70.

4 A. Okay. That looks right to me.

5 Q. And, in fact, isn't it true that this is not
6 only blast, but it's blast and fill, correct? Or
7 have you made a determination yet?

8 A. You said blast and fill?

9 Q. Yeah. There's going to be cut and fill on
10 this project to get down to proof of grade?

11 A. Well, just because you're doing an
12 excavation doesn't mean blast. I mean, that's what
13 you said.

14 Q. Well, rock -- removal of rock and materials
15 for fill. Do you understand that will be done
16 throughout this project?

17 A. Yes.

18 Q. And when you remove the materials and fill,
19 does not the fill have to be able to be in sufficient
20 size where you can use it for fill and compaction?

21 A. Yes, it does.

22 Q. Yet, again, it would appear to get to the --
23 now, do you know what the pink lines are on the map?
24 I don't think we ever got to that.

25 A. No, I don't think --

1 Q. They wouldn't be the edge of the excavation
2 or the removal that's indicated on the exhibit before
3 you at Station 65?

4 A. It looks about right. That's fine.

5 Q. Well, it would appear that that sewer line
6 as it moves across the project is at all locations
7 adjacent to or near the -- whatever excavation would
8 occur at the pink line?

9 A. Yes. It does to me, too.

10 Q. And, in fact, at one point it crosses the
11 excavation over on this side of the chart, does it
12 not?

13 A. Yes, sir.

14 Q. Now, do you expect while they're doing all
15 this construction that there will be heavy equipment
16 operated in that area?

17 A. Yes, I do.

18 Q. And that would include earth movers and
19 bucket shovels and big, heavy trucks?

20 A. Yes, sir.

21 Q. What other kind of things will be utilized
22 in this road construction?

23 A. Almost anything imaginable, sir.

24 Q. Weighing up to what size? Tons?

25 A. Yes.

1 Q. And do you expect any of those or all of
2 those kinds of heavy equipment to create vibrations
3 that will reach this pipeline?

4 A. Yes. They might.

5 Q. And would any of those vibrations affect
6 your zero tolerance limit on that pipeline?

7 A. Yes, it would.

8 MR. BROWNLEE: Thank you. I have
9 nothing further.

10 HEARING OFFICER: Mr. Duggan,
11 cross-examination of the witness?

12 MR. DUGGAN: Thank you.

EXAMINATION

QUESTIONS BY MR. DUGGAN:

16 Q. Now, Mr. Dressler, my name is Tim Duggan.
17 I'm an Assistant Attorney General and I'm here today
18 on behalf of Larry Coen who is the Staff Director for
19 the Land Reclamation Commission. And our role here
20 is not to take a position in favor of one side or the
21 other. My role here is to try to help the Commission
22 figure out what the facts ought to be and what should
23 apply to their decision.

24 In that connection, I have some areas I'm
25 confused about, and I hope you can sort of set me

1 straight on them. If I understand your testimony
2 about the zero tolerance, that is not absolutely
3 required by the Missouri Blasting Act, is it?

4 A. No, sir, it isn't.

5 Q. And if I understood what you were saying
6 about that in connection with the seismograph
7 requirement and the scale distance of 55, which
8 determines when a seismograph is required, I
9 understood you to say that that implies that
10 vibration is detected if you use a scale distance of
11 55 and a seismograph is required; is that right?

12 A. No, not exactly. That's the point when a --
13 that distance is at a point where no seismograph
14 would be needed, further than that. And so that's a
15 distance when -- it's the break point on when you
16 have to use a seismograph or not. And so that was
17 designed or decided by me that that would be a good
18 distance to use that may be safe for the zero
19 tolerance, having it outside that distance where no
20 seismograph would be required. That may -- that may
21 work.

22 Q. Okay. So maybe it's just a question of
23 semantics here, but the statute uses the term scale
24 distance value is 55 or less.

25 A. Yes. That number is just multiplied by the

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<p>1 pounds of explosives that you used on the Magruder 2 blast plan.</p> <p>3 Q. But that number 55 or less is the cut-off, 4 if you will, for the requirement that a seismograph 5 be used?</p> <p>6 A. Yes. And that was just assumed by me to be 7 a point where it may be safe if Magruder's would move 8 to that line instead of the 150 foot that might work.</p> <p>9 Q. So if it's a number calculated at 56 or 10 greater, say, and a seismograph is not needed under 11 the Act, it's not required under the Act, you are 12 reading into that that there's no vibration?</p> <p>13 A. That was assumed by me, that that would 14 probably be the case. You'd still need to check it, 15 but this was a number further out than 150 feet that 16 Dr. Worsey used that may provide zero vibration at 17 the line.</p> <p>18 Q. Okay. And that zero vibration is the 19 standard you would impose for the Magruder site; is 20 that correct?</p> <p>21 A. Well, it's a little broader than just me. I 22 mean, it's not within --</p> <p>23 Q. It's not required by the Blasting Act?</p> <p>24 A. Oh, no. Not at all.</p> <p>25 Q. It's not required by the Land Reclamation?</p>	<p>1 its condition, naturally, because it may be worse 2 than what we're thinking, and attach a seismograph to 3 it. Not touch -- put the seismograph up on top of 4 the ground, attach the seismograph to the line and 5 then do a test shot, a degradation study far away and 6 with a seismograph in between and see what -- where 7 the vibration levels turn to zero.</p> <p>8 Q. Okay.</p> <p>9 A. And then you'd know.</p> <p>10 Q. And I just want to make sure I understand. 11 This is your recommendation as an expert witness 12 testifying for the Petitioners, is that right, as 13 opposed to a legal requirement somewhere?</p> <p>14 A. Yes.</p> <p>15 Q. You mentioned alarms. I think the context 16 of your mentioning the word alarms was that there's 17 no provision for the word alarms in the Magruder 18 blast plan; is that right?</p> <p>19 A. That's correct.</p> <p>20 Q. Where would you expect to see these alarms?</p> <p>21 A. At the high point of the line before it goes 22 into the wastewater treatment plant. Because this is 23 all pumped up, and that's where the pressure would be 24 the greatest, someplace downline towards Tan-Tar-A.</p> <p>25 Q. Okay. And, again, you are suggesting that</p>
Page 227	Page 229
<p>1 A. That's absolutely right.</p> <p>2 Q. It's not required by the City of Osage Beach 3 ordinances, is it?</p> <p>4 A. Actually, that's correct, too, at this point 5 it isn't.</p> <p>6 Q. I'm trying to figure out what the legal 7 standard is that determines that zero tolerance, and 8 I'm not hearing that there is one. What I'm hearing 9 is that you -- and if I don't misquote you, I wrote 10 it down, in applying a, quote, casual application, 11 closed quote, of the Blasting Safety Act you came up 12 with 55 -- or greater than 55 is safe enough because 13 it's zero vibration on those lines?</p> <p>14 A. It may be. It still needs to be checked, 15 but that was --</p> <p>16 Q. Okay. But that would be your starting 17 assumption?</p> <p>18 A. Yes. Uh-huh.</p> <p>19 Q. Because that's the standard you would apply?</p> <p>20 A. Yes.</p> <p>21 Q. Now, do I understand your testimony to be 22 that in order to determine that 55 or less would 23 still be safe one would have to totally excavate that 24 line and analyze it to determine its condition?</p> <p>25 A. Well, you need to excavate it and look at</p>	<p>1 the absence of these alarms is an indicator of a 2 deficiency in this plan; is that right?</p> <p>3 A. Yes.</p> <p>4 Q. And you mentioned there is also an absence 5 in this plan of other preventive measures. What 6 other preventive measures besides alarms did you have 7 in mind?</p> <p>8 A. That seismograph and blasting reports be 9 provided to the Sewer District so that they could 10 look on what these readings are and know also if the 11 blasting should be shut down or not to keep it below 12 certain levels.</p> <p>13 Q. I believe you mentioned some sort of a catch 14 basin in the event of a cataclysmic break in the 15 line. Is that a preventive measure you had in mind 16 as well?</p> <p>17 A. No. Those are there already, the deep wells 18 where the pumps are at the input lines. And then 19 there's other pumps, they're called deep wells, and 20 it's where the sewage goes where it's pumped out. 21 And these are very large 200 horsepower 22 electric-driven pumps. And so there's hardly 23 anything to put there that would be necessary, but... 24 Because where the line is is a long way from anybody 25 on Magruder's to be able to see it or answer to it.</p>

Page 230	Page 232
<p>1 There isn't any way the waste treatment people will 2 really know when the line breaks or not, and it could 3 go on for quite awhile. 4 Q. Okay. And in your review of the blasting 5 plan, you were, in your mind, suggesting that those 6 alarms ought to be included in the mine blasting 7 plan; is that right? 8 A. Yes, sir, because -- 9 Q. And those alarms would be the responsibility 10 of Magruder; is that right? 11 A. I really hadn't gotten to that point with my 12 thinking. They need to be -- you mean responsible 13 for the operation or -- 14 Q. Installing them, operating them. 15 A. No. It really should be in the wastewater 16 treatment plant so that they know that they've got a 17 break and they need to take care of it. So it 18 wouldn't -- I don't think it would work very 19 functionally to give it to Magruder, but it should 20 work as best it could -- because you need prompt 21 action to get it fixed. That's the number one thing. 22 Q. Here's where I'm getting confused. I 23 understood that these lines deteriorate over time; is 24 that right? 25 A. Yeah. It's a long-term thing. Corrosion,</p>	<p>1 think that's correct because there's nothing on the 2 lines like blasting or trucks running over them 3 that's going to cause any need for it. And as long 4 as they're undisturbed, the zero tolerance, there 5 shouldn't be any need for it. 6 Q. So the only way that pipeline can fail is if 7 there is some activity on that property? 8 A. Yes, sir. You've got it. Yes, sir. 9 They're in the wrong place, the sewer lines. 10 Q. For a quarry? 11 A. Yes. That's going to operate both sides of 12 them, yes, sir. 13 Q. Or for just about anything else that could 14 cause any sort of vibration above zero on that 15 property in the future. Is that your testimony? 16 A. Yes, sir. 17 Q. And in the absence of any development 18 whatsoever on that property and therefore the absence 19 of anything that could cause any vibration above 20 zero, that's what you meant when you said the lines 21 are going to be there forever? 22 A. Yes, sir. Forever is a long time. I could 23 maybe say 80 to 100 years would be more accurate. 24 Q. Well, do these things have a projected life 25 span by the manufacturer?</p>
Page 231	Page 233
<p>1 age. 2 Q. And that they could fail? 3 A. Yes. 4 Q. Independent of any quarry operation on the 5 Magruder property; is that right? 6 A. Yes. As they age, yes, sir. 7 Q. And did I correctly hear you state that the 8 absence of this alarm system indicated a cavalier 9 attitude on the part of Magruder in the formation of 10 its blasting plan? 11 A. No. The cavalier attitude goes to almost 12 everything that I've seen or reviewed on the blasting 13 plan, because it's always done at best case scenario 14 to make the blasting look good and not on what is 15 worst case or what could happen well along the line. 16 Q. But those alarms do not exist today even 17 though there is a potential failure of those lines 18 even if there's no quarry operation going on on that 19 property; isn't that right? 20 A. I'm well-aware of that, yes, sir. 21 Q. So the absence of alarms is perhaps cavalier 22 on the part of the persons responsible for 23 maintaining those lines and that plant. Is that your 24 testimony? 25 A. You know, you could say that, but I don't</p>	<p>1 A. The ductile iron is about 80 years, 2 according to their manuals. PVC is about 45. 3 Q. Now, you mentioned that you didn't see in 4 this blasting plan what sounded to me like an 5 environmental impact report. Is that a deficiency in 6 the blasting plan? 7 A. I think it is, yes, sir. 8 Q. So in your view, for a blasting plan to be 9 acceptable, there has to be a written analysis of all 10 the impacts on the environment that could occur as a 11 result of the blasting? 12 A. Yes. Because if the blasting isn't done 13 very correctly and with a lot of safeguards, it's 14 guaranteed -- and it's covered adequately in this 15 publication -- that environmental impacts occur that 16 affect the environment significantly. 17 Q. Okay. And you also looked for and found as 18 a deficiency because it wasn't in there an economic 19 analysis of the cost of a clean-up, for example? 20 A. It's staggering. It would -- it would make 21 USA Today newspaper. 22 Q. Okay. 23 A. Now, having calculated, all I calculated was 24 how many gallons may be exposed to the little creek 25 which leads into the Osage River, not the lake but</p>

1 the Osage River, and that was a substantial amount of
2 pathogens, untreated sewage, and would have to be
3 contained and then cleaned up on the water first and
4 then on the land, and it would be tremendous.

5 Q. Okay. Back on my original theme as to the
6 requirement for such an impact report, be it
7 environmental or economic, nothing in the Missouri
8 Blasting Safety Act requires that a blaster prepare
9 an environmental impact report, as you describe it;
10 is that right?

11 A. Yes, sir. I'm aware of that and concerned
12 about it.

13 Q. And nothing in the Land Reclamation Act
14 requires that an environmental impact report, an
15 economic report as you've described, be prepared
16 before quarry operations begin; is that right?

17 A. Yes, sir.

18 Q. And, in fact, the Missouri Land Reclamation
19 Act doesn't even require a blasting plan, does it?

20 A. Again, you're very correct, sir. I'm
21 concerned about that, too.

22 Q. And you mentioned also at some point in your
23 testimony that even if somebody follows a properly
24 designed blasting plan that is supported by an
25 environmental impact report and an economic damage

1 assessment that that doesn't guarantee that there
2 won't be some sort of accident or other event that
3 could cause damage; isn't that right?

4 A. Yes, sir. That's right on, yes, sir.
5 Mistakes will happen.

6 Q. But despite the risk that some mistakes may
7 happen, permits are issued all the time; isn't that
8 right?

9 A. You mean in Missouri?

10 Q. In Missouri. For quarries.

11 A. Yes, sir.

12 Q. And they're issued by cities for
13 construction blasting along pipelines?

14 A. Yes, sir.

15 Q. And none of those permits are an absolute
16 guarantee that nothing wrong will happen. Is that a
17 fair statement?

18 A. Yes, sir.

19 Q. And it's also your testimony, as I
20 understand it, that this blasting plan cannot be
21 considered adequate because it doesn't address the
22 entire life span of the quarry; is that right?

23 A. Yes, sir.

24 Q. In looking at Slide Number 25, part of
25 BP-25, and it's Page 25, towards the end, second to

1 the last, I believe.

2 A. Well, I don't have Page 25. Oh, here we go.
3 Thank you. Yes, sir, I've got it.

4 Q. Okay. The top of it says, "Issues,
5 Environmental Impacts"?

6 A. Yes, sir.

7 Q. And the fourth major bullet down says, "Loss
8 of water wells through ground water withdrawal"?

9 A. Yes, sir.

10 Q. Which water wells are going to be lost
11 through ground water withdrawal if this blasting plan
12 is followed?

13 A. Okay. It would be all people who have wells
14 that closely surround this property. Because when
15 the hole gets put down in there deep, 150 feet, I
16 think, from the coring when it's in full operation
17 and almost done in A, the water wells around --
18 surrounding that will be drawn down because much of
19 the water that is flowing through that property will
20 go down because there's a hole there. And the water
21 that serves these others is called well drawdown, and
22 it's a phenomena whenever you dig a deep excavation
23 in the path of ground water.

24 Q. Have you identified who owns those water
25 wells you're talking about?

1 A. No, sir, I haven't.

2 Q. Do you have any idea what radius these wells
3 are around -- or circumference around the hole you
4 just described?

5 A. No, sir, I haven't.

6 Q. So we don't know if we're talking about
7 1 mile or 100 miles?

8 A. My judgment would be not more than 1 mile
9 from the center of the excavation. But no, I haven't
10 counted those.

11 Q. You haven't counted those and you haven't
12 made a study of that water loss for any particular
13 wells within that location?

14 A. Yes, sir. That's correct. And these
15 considerations on environmental are many of them
16 lifted directly from this report also.

17 Q. Okay.

18 A. In other words, there's close agreement with
19 these and this report.

20 Q. Okay.

21 HEARING OFFICER: "This report" being
22 the report on the karst topography, correct?

23 MR. DRESSLER: Yes.

24 HEARING OFFICER: I just want my
25 record clear.

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<p>1 MR. DRESSLER: I don't know if it's 2 12 or -- 3 HEARING OFFICER: BP-8. Are you 4 finished with 25, Mr. Duggan? 5 MR. DRESSLER: I think he is. Were 6 you through, sir, on 25? 7 HEARING OFFICER: On 25, Mr. Duggan, 8 are you through with the witness on that? 9 MR. DUGGAN: Let me check real quick 10 here. Okay. 11 Q. (By Mr. Duggan) The only other question I 12 have with respect to 25, you've identified these as 13 environmental impacts. Are any of these 14 environmental impacts addressed by the Missouri 15 Blasting Safety Act? 16 A. Oh. No, sir. 17 Q. Or the Missouri Land Reclamation Act? 18 A. I don't think so. This is something, I 19 believe, new. 20 Q. And I don't mean to pick on you about this 21 pencil demonstration that you gave us, but it 22 occurred to me that you applied quite a bit of force 23 to that pencil to break it. 24 A. Yes. 25 Q. But you were using that as an analogy for</p>	<p>1 cataclysmic break in the line; isn't that right? 2 A. Yes. A fair description. 3 Q. And that occurred over time at a joint that 4 lost support because of settling of bedding beneath 5 it; is that right? 6 A. Yes, sir. 7 Q. And, again, I just want to make sure I 8 understand your expert opinion. In the absence of 9 any activity on that property whatsoever that would 10 cause any sort of vibration, you wouldn't expect this 11 scenario to occur; is that right? 12 A. I don't understand. 13 Q. You wouldn't expect the bedding to stop 14 supporting a joint in the line? 15 A. Well, no. There may be loss of some bedding 16 support right now as we speak, and there has been no 17 blasting. The blasting will accelerate it and 18 exacerbate it, but there may be loss of support right 19 now like this. 20 Q. And the only way to determine that would be 21 to dig it up and look? 22 A. Yes. 23 Q. And that loss of bedding could be due to 24 entirely natural causes? 25 A. Yes, sir.</p>
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<p>1 vibrations affecting the pipe, vibrations through the 2 ground; is that right? 3 A. Yes, sir. Strictly. And you're exactly 4 right. And you're not picking on me. That's very 5 fair and correct. I should have been using the paper 6 clip because that's a lot better analogy than a 7 pencil. 8 Q. Well, if we -- if we try to perform an 9 experiment in a lab and we took that pencil and put 10 it in some sort of holder and we were able to vibrate 11 that pencil between the things holding it -- 12 A. Yes. That's how you're supposed to do it. 13 Q. -- at the rate suggested by the other expert 14 testimony, which is a distance back and forth of 15 about the thickness of this piece of paper, how many 16 years would it take to break that pencil? 17 A. Right. I just had a few minutes, so that's 18 why. 19 Q. Looking at Page 19 of that Exhibit BP-25... 20 I'm not going to bounce around between more exhibits 21 than this one. 22 A. All right. And what page again, sir? 23 Q. 19. 24 A. 19? Okay. I've got it. 25 Q. That depicts what you would probably call a</p>	<p>1 Q. You gave us a definition at one point of 2 karst geology, and if I remember correctly, you said 3 karst is anytime you have limestone and water; is 4 that right? 5 A. Karst occurs as a result of the acidic 6 action of water and the low-grade limestones which we 7 have here throughout and are on the geographical maps 8 that were provided by Dr. Worsey, yes, sir. And 9 that's how it works. 10 Q. I just wanted to be clear, because there's a 11 lot of limestone in Missouri; isn't that right? 12 A. Yes, there is. 13 Q. And every limestone quarry is potentially in 14 a karst area; is that right? 15 A. Well, no. 16 Q. Why not? 17 A. Because all of them don't have the water 18 flow going in there. Without the water flow, it's 19 free from karst. 20 Q. Okay. 21 A. Even with the limestone. 22 Q. Okay. 23 A. It's the -- the reactive agent is water that 24 eats away at this for eons. I don't think anybody's 25 been able to determine yet, even the people that</p>

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<p>1 wrote this treatise, how many years it takes to form 2 a cavern or the voids in the limestone. 3 Q. And the only way to make some sort of an 4 assessment of any karst features anywhere on this 5 200-acre site would be to conduct a coring 6 investigation, as you described; is that right? 7 A. Yes, sir. Right on. 8 Q. And that would tell you where the water 9 table is? 10 A. And also where the voids are as you're going 11 down through them. 12 Q. And it would also tell you the slant or 13 gradient of the various rock formations below the 14 surface; isn't that right? 15 A. Yes. It would give you the direction of 16 where the water -- ground water is flowing, how much 17 and all that. 18 Q. And you might even encounter some of the 19 voids that you've talked about? 20 A. Yes. 21 Q. And the only way to do that is through a 22 thorough geologic investigation with these corings at 23 various depths on certain centers throughout the 200 24 acres; is that right? 25 A. If they're going to -- I would say yes, if</p>	<p>1 bit -- 2 A. That's one way to do it if your guidance is 3 only money. 4 Q. Right. 5 A. And I realize that's important, but there's 6 higher things in life to do than just get money. 7 Q. All right. But you understand that -- 8 A. It's called safety. 9 Q. -- that they have a disagreement with you 10 with respect to whether one can safely blast near 11 those pipelines if you're no closer than 150 feet? 12 That's a disagreement between you and Dr. Worsey, 13 isn't it? 14 A. Yes. 15 Q. Now, you also mentioned that the problem -- 16 one problem you see with that 150-foot set-back is 17 that it's purely voluntary and not required by any 18 regulation; is that right? 19 A. That's right. Because all they have to keep 20 away from legally is the easement, and that's only 15 21 foot, and that's inadequate for what's going to be 22 coming. 23 Q. And you've been involved with permitting 24 activities in the course of your career; is that 25 correct?</p>
Page 243	Page 245
<p>1 they're going to use the full 200 acres for mining. 2 Q. Okay. That kind of geologic assessment is 3 not required in order to get a permit to operate a 4 limestone quarry under the Missouri Land Reclamation 5 Act, is it? 6 A. That is correct. 7 MR. DUGGAN: I think I'm just about 8 finished here. Let me check a couple more notes. 9 Q. (By Mr. Duggan) You mentioned the 150-foot 10 set-back seemed to be just pulled out of the air. 11 A. Yes, I did. 12 Q. Would it be a surprise to you if the 13 150-foot set-back was determined based on the 14 economic viability of the amount of rock any closer 15 than 150 feet to the pipeline? 16 A. I really don't know how that got pulled out 17 of the air. 18 Q. Okay. But assuming that that was the basis, 19 that's a reasonable thing for a quarry owner or 20 operator to do, isn't it, decide, well, I don't need 21 to get any closer to that line because there's not 22 enough rock there to make it worth my trouble and 23 cost? 24 A. Well, maybe so. 25 Q. Okay. Now, you also quarreled a little</p>	<p>1 A. Yes, sir. Core of engineers and all the way 2 down. 3 Q. So you're aware that a regulatory agency can 4 put conditions in a permit that then makes that 5 enforceable against the permittee, right? 6 A. Yes. And we've handled very successfully 7 and been very supportive of four permits through your 8 Department for landfills and CD's and several other 9 things. 10 Q. Sure. And some of the conditions in those 11 permits are not necessarily set forth in the 12 regulations; is that right? 13 A. Yes, sir, that's right, but they need to be 14 done. 15 Q. They need to be done, and once they're in 16 the permit, they're legally binding on the permittee; 17 is that right? 18 A. Yes, sir. That's what I've told all my 19 clients when I get back from here, that's how it's 20 got to be. 21 Q. Sure. 22 MR. DUGGAN: I don't have any other 23 questions for you. Thank you very much. 24 HEARING OFFICER: Thank you, 25 Mr. Duggan. Redirect, Mr. Mauer?</p>

62 (Pages 242 to 245)

1 MR. MAUER: Just one thing.

2 EXAMINATION

3 QUESTIONS BY MR. MAUER:

4 Q. Mr. Dressler, just so we're clear on your
5 zero tolerance, the zero tolerance, as I understood
6 your testimony, was zero tolerance beyond the
7 original intent and design of the sewage lines as
8 they're placed and designed for the parcel on the
9 Magruder property; is that right?

10 A. Yes. Absolutely it is.

11 Q. Okay. So the lines that may be hanging
12 under the Grand Glaize Bridge were intended and
13 designed to be there and to withstand any vibrations
14 that might be caused by traffic coming across it; is
15 that right?

16 A. Well, yes. And I'm sorry I hadn't looked at
17 them, because I could have explained better the
18 support. I'm sorry I didn't look at those on the
19 bridge. Had I known this was going to come up,
20 because I could explain better the support system
21 that's there because they are designed -- on the
22 bridge they are designed and supported properly to
23 handle traffic vibration.

24 Q. Okay. But you haven't looked at them and
25 you don't know how they were put in?

1 A. That's right. My job was to work on the
2 Magruder situation, not go to the bridge, come to the
3 Highway 54 expansion and all that.

4 Q. So you don't know how they were designed,
5 you don't know how they were constructed underneath
6 the bridge, right?

7 A. That's right. I hadn't looked at those.
8 And the design of the lines that's on the Magruder
9 property was never intended to have any vibration any
10 more than just sitting there and doing their job.

11 MR. MAUER: Okay. Thank you.
12 Nothing further.

13 HEARING OFFICER: Mr. McGovern, any
14 redirect.

15 MR. MCGOVERN: No, Mr. Tichenor.

16 HEARING OFFICER: Mr. Brownlee, any
17 recross on the points covered? I'll allow you some
18 leeway if you feel you need to go into the points
19 covered by Mr. Duggan, but...

20 EXAMINATION

21 QUESTIONS BY MR. BROWNLEE:

22 Q. Just on what Mr. Mauer asked you. You said
23 the Magruder property lines were just installed just
24 to sit there and do what they're supposed to do,
25 correct?

1 A. Yes, sir.

2 Q. Now, can you tell me from a scientific or
3 engineering level what you mean by that in terms of
4 vibration that they're designed to handle while
5 they're just sitting there doing what they're
6 supposed to do?

7 A. They're not designed for earthquake damage
8 or any kind of vibration. It's just a sewer line
9 that's put in the ground and it sits there with no
10 disturbance.

11 Q. I might give you the earthquake, but do you
12 have any empirical data that you can tell us or show
13 us that those lines are designed and put in the
14 ground to withstand absolutely no other vibrations?
15 Do you have any evidence that that statement you made
16 has any scientific proof?

17 A. Yes.

18 Q. What is it?

19 A. I do. We design those and we put them in
20 and we do no concern, and no civil engineer that I
21 know of in Kansas City would do that.

22 Q. You didn't design these or put these in,
23 sir.

24 A. No, but I know the people very well, AC
25 Kirkwood, that did the plastic lines. We have worked

1 with them.

2 Q. Well, knowing the people that did something
3 back in 1986, you still don't have any scientific
4 evidence as to those tolerances on those two lines
5 that they were designed for to sit in the ground, do
6 you?

7 A. I don't know as I could answer that
8 question.

9 Q. Okay.

10 A. Any way that you've posed it.

11 Q. Now, I believe that since we've turned to
12 these lines again underneath the bridge, you say they
13 could be designed to have absolutely no vibration.
14 Is that your statement?

15 A. Yes, sir.

16 MR. MAUER: All right. I want to
17 clarify. It was no vibration beyond what they were
18 designed to withstand.

19 MR. DRESSLER: To handle, yes, sir.
20 That's what I'm saying.

21 Q. (By Mr. Brownlee) Well, do you know what
22 the ductile pipe design of that line was designed to
23 stand?

24 A. No, sir, I don't. I haven't looked at that
25 yet.

1 Q. Even the institute that makes them, they
2 never even computed that figure, did they, sir?

3 A. No. There has been no calculations on that.

4 Q. Well, if they haven't calculated it, how are
5 you going to calculate it?

6 A. Because the people that design that stuff
7 are like us, and you design supports that isolate and
8 re-strain and hold it so that it's not receiving any
9 vibration.

10 Q. Well --

11 A. And if you'd like, I'd put a seismograph
12 with the City's permission on the lines and tell you
13 how much vibration there is.

14 Q. What would you tell from a seismograph on
15 those lines?

16 A. If they're getting any vibration.

17 Q. Any vibration?

18 A. Yes, sir. And how much.

19 MR. BROWNLEE: This is Applicant's
20 Exhibit...

21 HEARING OFFICER: 31.

22 MR. BROWNLEE: 31.

23 MR. MCGOVERN: I'm assuming this
24 isn't on the original list either?

25 MR. BROWNLEE: No. This just came

1 call another witness and have the witness say this is
2 a fair and accurate representation. Objection is
3 overruled at this point.

4 Q. (By Mr. Brownlee) Does this appear to be
5 ductile iron?

6 A. The color of it is wrong for ductile iron,
7 so... Maybe there's a coating on the outside of it
8 to protect it.

9 Q. Would that be a typical suspension system if
10 it were ductile iron to support a pipe under a
11 bridge?

12 A. I think that's a pretty good system, hanger
13 system.

14 Q. And is this system designed to prevent any
15 vibration?

16 A. As much as possible, yes.

17 Q. Well, now, wait. There's a lot of
18 difference between as much as possible and zero.

19 MR. MAUER: Well, now, again I'm
20 going to object to the extent he keeps saying zero
21 when the witness has already said zero beyond the
22 intended design. To say that it's going to be zero
23 is not what the witness has testified he means by
24 zero tolerance. So if the record is clear, is it
25 going to be --

1 up.

2 HEARING OFFICER: This is a
3 photograph. Mr. Brownlee, is this the 24-inch main.

4 MR. BROWNLEE: It's the 28 ductile
5 iron that goes into the 24 -- 16. 16.

6 HEARING OFFICER: 16-INCH DUCTILE
7 LINE UNDER THE GRAND GLAIZE BRIDGE. OKAY. 16-INCH
8 DUCTILE LINE.

9 Q. (BY MR. BROWNLEE) YOU CAN SEE THE WATER
10 UNDERNEATH THIS IN THE PHOTOGRAPH, CORRECT?

11 A. YES, I DO.

12 MR. MAUER: I'm going to object.
13 Unless the witness can identify that this is the pipe
14 underneath the Grand Glaize Bridge, which I think
15 he's already said he's never seen, I don't know that
16 it would be appropriate to be asking some sort of
17 hypothetical questions, and I would object. He's
18 already said he's never even looked at it.

19 MR. MCGOVERN: Nor can this witness
20 testify that this fairly and accurately depicts --

21 HEARING OFFICER: I understand that,
22 Gentlemen. I will allow Mr. Brownlee to tie it up by
23 the person who took the photograph. Subject to that,
24 based upon the witness' testimony, Mr. Brownlee can
25 lay the foundation as to what this represents. We'll

1 HEARING OFFICER: Mr. Mauer, I must
2 tell you, that's not the way I've been understanding
3 this witness' testimony on zero tolerance all day
4 long, and now what I'm hearing is, well, this is
5 designed to have vibration, that this doesn't meet
6 zero tolerance. And so I've got to tell you, the
7 Hearing Officer is in the nebulous twilight of
8 conjecture and speculation on this particular point
9 based upon Mr. Dressler's adamant position that
10 ductile iron pipe is designed for zero PPV tolerance.
11 And that's the testimony I have in the record, and so
12 I'm going to allow Mr. Brownlee to examine on this
13 point, because I think it is of such importance, and
14 you will be allowed to ask the witness to further
15 clarify.

16 Q. (By Mr. Brownlee) So would this suspension
17 system -- and you said it looked like a good
18 system -- would this -- again I'm representing the
19 fact this is the line, 16-inch ductile iron line
20 under the Grand Glaize Bridge. Would this system
21 prevent any vibration from reaching this line from
22 the traffic?

23 A. Well, I'd have to answer I don't know, but
24 it looks like a good connection, but it would have to
25 be checked.

1 Q. Well, if it had .33 inches per second at
 2 2 hertz, would that be vibration on this line?
 3 A. Is that inches per second or pounds per foot
 4 or what?
 5 Q. I said inches per second.
 6 A. Oh, I didn't hear that.
 7 Q. .33 inches per second at 2.0 hertz. Would
 8 that be vibration on this line?
 9 A. Yes, it would.
 10 Q. And that would be beyond the zero tolerance,
 11 then, wouldn't it, sir?
 12 A. Was this a seismograph attached to the line?
 13 Q. Vibra-Tech seismograph.
 14 A. Okay. I'm familiar with that, yes, sir.
 15 Q. And that would be vibration past the zero
 16 tolerance you've testified to, wouldn't it, sir?
 17 A. That certainly would, yes.
 18 Q. And you understand that a pipeline like this
 19 suspended under the Grand Glaize Bridge -- how many
 20 cars and trucks pass over that each day?
 21 A. You know, I don't know. And I don't care.
 22 Q. Would the vibration on this bridge be
 23 continuous on that line just from the fact it's
 24 suspended and hanging over a bridge that there's
 25 constant traffic across?

1 MR. McGOVERN: I would object to the
 2 testimony. It's not hanging over the bridge. It's
 3 held up, at least according to this picture --
 4 HEARING OFFICER: It's suspended
 5 under the bridge.
 6 MR. BROWNLEE: I'm sorry.
 7 A. I really don't know because I haven't looked
 8 at it.
 9 Q. (By Mr. Brownlee) So in your engineering
 10 44 years of experience, you're just not sure if the
 11 line suspended under -- ductile iron pipeline
 12 16 inches pressurized hanging under a bridge wouldn't
 13 sustain vibrations from traffic crossing that bridge?
 14 You just have no opinion?
 15 A. That it wouldn't handle vibrations?
 16 Q. Wouldn't have vibration.
 17 A. No. It will have some, but I just don't
 18 know how much. And this .33, I mean, much of this
 19 has been sprung on me just today in an area that I
 20 haven't looked at or done anything about.
 21 Q. Well, you're a pipeline expert, sir. Do you
 22 know what .33 on a ductile pipeline is?
 23 A. Yes, I do.
 24 Q. It's vibration, is it not?
 25 A. Yes, it is.

1 MR. MAUER: Objection, your Honor.
 2 Asked and answered for the third time.
 3 HEARING OFFICER: Mr. Brownlee, we're
 4 going to take a short recess. My court reporter's
 5 disk is full, so let's take -- that will give
 6 everybody about five minutes or so to stretch their
 7 legs.
 8 MR. BROWNLEE: I have one question
 9 left.
 10 HEARING OFFICER: You have one
 11 question left? Go ahead with your last question,
 12 then we'll take a break.
 13 Q. (By Mr. Brownlee) I believe Mr. Duggan
 14 asked you about alarms on the lines on the property,
 15 and you said, yes, but that there's nothing on the
 16 lines like trucks running over them right now?
 17 A. As far as I know.
 18 Q. As far as you know?
 19 A. I mean, in the plan it may happen.
 20 Q. But do you know today whether there are
 21 trucks running over any of those lines at any point?
 22 A. I don't know that, no, sir.
 23 HEARING OFFICER: All right. With
 24 that, we'll take a recess and we're off the record.
 25 Let's try to be back in about five minutes.

1 (Brief recess.)
 2 HEARING OFFICER: The hearing will
 3 come to order. Mr. Brownlee, do I understand that
 4 you have completed your recross on the witness?
 5 MR. BROWNLEE: Yes, your Honor. And
 6 I'd like to, if I can, mark the final exhibit, which
 7 is the photograph of 31. And then I'd offer those
 8 that I'm not smart enough to know what numbers I'm
 9 offering, but --
 10 HEARING OFFICER: Okay. The
 11 photograph is Applicant's 31. What I have, I have
 12 Applicant's 26, which is the list of the blasting
 13 projects Mr. Dressler testified to. Is there any
 14 objection to that?
 15 MR. MCGOVERN: No.
 16 MR. MAUER: No.
 17 HEARING OFFICER: No objection? It
 18 is received. I have the six -- wait just a moment.
 19 That's Applicant's 26. I have Applicant's 27, which
 20 is the letter -- the Gatlin letter with the blasting
 21 permit; however, the witness could not identify that.
 22 Mr. Brownlee -- I'll ask, is there an objection?
 23 MR. MCGOVERN: Yes, your Honor.
 24 MR. MAUER: Yes.
 25 HEARING OFFICER: I figured there

1 would be. I don't think I've got a foundation for
2 this. This witness said he never saw it.

3 MR. BROWNLEE: Okay.

4 MR. MCGOVERN: Just to state the
5 objection for the record, it is for lack of
6 foundation, as well as it wasn't originally disclosed
7 on the exhibit list.

8 HEARING OFFICER: I'm going to
9 sustain on the grounds there's no foundation
10 because...

11 MR. BROWNLEE: We couldn't disclose
12 it because the event occurred on May 21st.

13 HEARING OFFICER: We've got a lot of
14 documents that have come in that weren't disclosed
15 that we've supplemented, so --

16 MR. MCGOVERN: And we have objected
17 to those.

18 HEARING OFFICER: Okay. The Gatlin
19 letter is not admitted.

20 MR. BROWNLEE: 28 is the Highway
21 Department...

22 HEARING OFFICER: Is this in a
23 smaller format? The MODOT relocation map. Objection
24 to it?

25 MR. MCGOVERN: No. This map, Mr.

1 Brownlee had called me and asked if we had any
2 objection to this document, although it was not
3 originally submitted, and I said no, I did not.

4 HEARING OFFICER: All right. Very
5 well. Then 28 is admitted. I need you to get me
6 a -- whatever. If that's the size.

7 MR. BROWNLEE: We've got a big one,
8 but maybe we could take it to Kinko's, but then you
9 couldn't read anything.

10 HEARING OFFICER: Leave it as it is
11 because we've got those other three maps that were
12 part of the blast plan reports that are that size.
13 Then you've got Applicant's 29, the cross section.
14 Any objection? No objection. It is received.

15 MR. MCGOVERN: I'm sorry. I didn't
16 hear any foundation as to where that came from or
17 where it was created. If Richard could just tell me.

18 MR. BROWNLEE: He identified it as
19 part of the MODOT, as Section 35. It's their cross
20 section.

21 MR. MCGOVERN: If it's part of that,
22 I have no objection.

23 HEARING OFFICER: Applicant's 30 is
24 the -- I'm referring to it as the blasting permit,
25 application for blasting permit.

1 MR. MCGOVERN: Only objection, it was
2 not identified within the original list of exhibits.

3 HEARING OFFICER: Okay. Objection is
4 overruled. It is received. Finally, we have
5 Applicant's 31, which is the photograph which the
6 witness did testify to, although he, of course, could
7 not identify it since he didn't take it. Objection?

8 MR. MAUER: Yes.

9 MR. MCGOVERN: Objection from the
10 standpoint that it was not included within the
11 original exhibit list. Additionally, it's
12 irrelevant.

13 MR. MAUER: And there's no foundation
14 established by this witness. I believe...

15 HEARING OFFICER: I believe so. Mr.
16 Brownlee, if you've got somebody else that you want
17 to lay the foundation. As far as not being disclosed
18 with the other exhibits, that's overruled.

19 MR. BROWNLEE: I could call
20 Mr. McDonald and say he took the photograph
21 underneath the Grand Glaize Bridge, but if that's
22 what it's going to take... And it's relevant because
23 it addresses the issue of vibrations on this
24 pipeline.

25 HEARING OFFICER: Well, we've got the

1 testimony in. Mr. Mauer, if you insist, we'll call
2 Mr. McDonald.

3 MR. MAUER: Well, your Honor, what
4 I'd like to know is, when was the photograph taken?
5 Because my understanding is when Richard handed this
6 picture -- when Mr. Brownlee handed this picture to
7 me, it was, well, it just came up. Well, it looks to
8 me like the picture was taken in the daylight.
9 Unless it was taken this morning after Mr. Dressler's
10 deposition yesterday, then I don't know how it just
11 came up. And I join Mr. McGovern's objection that it
12 should have been disclosed to us. Unless this is an
13 issue that came up just after Mr. Dressler's
14 deposition, then I do object.

15 HEARING OFFICER: When was the
16 photograph taken?

17 MR. BROWNLEE: Last week.

18 HEARING OFFICER: Last week?

19 MR. BROWNLEE: And it came up as a
20 result -- the reason that we did it is because of the
21 zero tolerance issue, as to whether there's other
22 places along this line where there was activity such
23 as that would create vibration.

24 MR. MAUER: Your Honor, then I
25 absolutely object that it should have been produced,

1 and I would have had an opportunity to discuss it
2 with Mr. Dressler, otherwise it's a complete
3 surprise, and that was the whole reason for your
4 exhibit list and I object.

5 HEARING OFFICER: You're still going
6 to get an opportunity to talk to Mr. Dressler about
7 it. We've had too much testimony about it to leave a
8 gap in the record. Applicant's 31, based upon the
9 representation it was picture taken by Mr. McDonald
10 last week, is received. All right. That concludes
11 as far as the documents which you offered, Mr.
12 Brownlee.

13 Redirect on the points covered in recross,
14 Mr. Maurer?

15 MR. MAUER: Nothing further, your
16 Honor.

17 HEARING OFFICER: Mr. McGovern?

18 MR. MCGOVERN: Very briefly.

19 HEARING OFFICER: Proceed.

20 EXAMINATION

21 QUESTIONS BY MR. MCGOVERN:

22 Q. Mr. Dressler, the Hearing Officer, I
23 believe, indicated a need for clarification on the
24 issue of zero tolerance, so I think we need to
25 address that. When you have testified to zero

1 tolerance, are you referring to a zero tolerance
2 above the vibration that that pipe is expected to
3 receive for its intended purpose?

4 A. Yes, that's what I'm saying.

5 Q. And so you've got a pipe that when placed in
6 the ground, much like pipe on the Magruder property,
7 there is a certain amount of vibration that that pipe
8 may experience simply by the waste flowing through
9 the pipe; is that correct?

10 A. Yes. The way it's installed.

11 Q. When you're talking about zero tolerance,
12 then, are you talking about a vibration level above
13 the design specifications for that pipe, an amount of
14 vibration above design specifications?

15 A. Yes.

16 Q. Exhibit 31, do I understand you didn't take
17 the picture and may not know exactly where this is
18 located?

19 A. I don't know anything about it.

20 Q. Do you think this in any way depicts the
21 manner in which the pipe is installed on the Magruder
22 property?

23 A. No, sir. It absolutely isn't.

24 Q. All of these suspensions and spring loads
25 and bracing and all of that, would you expect to find

1 anything like that on the Magruder property?

2 A. No, sir. Absolutely not.

3 MR. MCGOVERN: I don't have anything
4 further.

5 HEARING OFFICER: Mr. Brownlee, any
6 recross on those points only raised by Mr. McGovern?

7 MR. BROWNLEE: Yes.

8 EXAMINATION

9 QUESTIONS BY MR. BROWNLEE:

10 Q. I think I've covered this. Mr. McGovern
11 asked you that zero tolerance is -- your
12 understanding is it's vibrations above what the lines
13 are designed to receive on the Magruder property.
14 That was your statement?

15 A. Yes, sir.

16 Q. And I asked you just a bit ago, do you have
17 any evidence, any scientific evidence, that you can
18 present as to what those lines are presently designed
19 to receive for either the PVC pipe or that ductile
20 iron pipe?

21 A. Only the PVC pipe.

22 Q. What's that?

23 A. I'll need the book to look it up, but yes,
24 I've looked it up and I have it. I don't commit it
25

1 to memory because there's no need to.

2 Q. But you don't know that for the ductile
3 iron, do you, sir?

4 A. No, I don't.

5 MR. BROWNLEE: Thank you. Nothing
6 further.

7 HEARING OFFICER: Any redirect on
8 that point? I'm sorry. Mr. Duggan?

9 MR. DUGGAN: Nothing further.

10 HEARING OFFICER: Any redirect on
11 that question?

12 MR. MAUER: Nothing further, your
13 Honor.

14 MR. MCGOVERN: Nothing further.

15 HEARING OFFICER: Mr. Dressler, I
16 appreciate your testimony, as I have of the other
17 three witnesses, the expert witnesses.

18 MR. DRESSLER: Thank you. Thank you
19 very much.

20 HEARING OFFICER: All four of you
21 have provided very much needed information for me to
22 review and digest in order to prepare the proposed
23 order for the Commission.

24 I want to cover hopefully very briefly a
25 couple of points that I really have concern about

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<p>1 because it goes so much to what I consider 2 essentially the core issue on this. 3 MR. DRESSLER: Okay. I'd love to 4 help. 5 EXAMINATION 6 QUESTIONS BY HEARING OFFICER: 7 Q. In your direct testimony, you testified 8 concerning a pre-split face. Do you recall that? 9 A. Yes, sir, I do. 10 Q. And I'm not going to try to have my court 11 reporter go back and find it, but you testified about 12 a pre-split face. 13 A. Yes, sir. 14 Q. And in conjunction with that you testified, 15 I believe, what I took down, that a sheer plane in 16 rock cannot transmit vibrations. 17 A. That's right. 18 Q. Do you mean by that a sheer plane of rock or 19 that there is a void, a gap? 20 A. There's a void there, yes, sir. 21 Q. There's a void? There's a space? 22 A. That's what a sheer plane produces. There's 23 a void there, and that's how you can do heavy duty 24 blasting on the other side of the sheer plane, the 25 split face, because of that void.</p>	<p>1 you're saying an eighth of an inch to a quarter of an 2 inch sheer plane should be cut, and if that's cut, no 3 vibrations are going to get to the pipe? 4 A. That's correct. Yes, sir. 5 Q. Are you familiar with the wall that faces 6 to -- the huge wall that's been referred to as a hog 7 back, the whole ridge that extends up through -- 8 A. Yes. Yes, sir. 9 Q. And you're familiar with that wall that is 10 just across the road from the sewer plant? 11 A. Yes. Uh-huh. 12 Q. And so your contention is as an expert that 13 even though that wall is there and it's hundreds and 14 hundreds of feet back from where the blasting is 15 going to occur from the plant that a sheer plane cut 16 let's say just adjacent to the road of an eighth to a 17 quarter of an inch would stop any vibration from the 18 plant? 19 A. Yes, sir, I am. 20 Q. Thank you. Wait just a moment. 21 A. That was a very good question, though. 22 Q. I know we've beat this zero tolerance to 23 death, but this morning when you first testified 24 about ductile iron, my understanding was your 25 investigation had shown there is no research to</p>
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<p>1 Q. And that would be -- 2 A. It's air. 3 Q. It's air? 4 A. Yeah. 5 Q. And you testified as to a width for that 6 cut, I believe? 7 A. Yes. It was about a -- sometimes it's an 8 eighth of an inch, sometimes it will be a quarter. 9 Q. So do I understand that if a requirement was 10 made at 150 feet from that sewer line that a sheer 11 plane of a quarter inch was dug no vibration can 12 reach that pipe? 13 A. That's correct. Yes. And it wasn't done or 14 specified. And that would be fine. Vibrations won't 15 travel in a void, and that's what you've created as a 16 continuous void wherever you put that from the top of 17 the rock that you're blasting to the bottom, 50 foot. 18 Q. From the top of the rock to the bottom where 19 you're blasting? 20 A. Yes, sir, 50 foot. 21 Q. So if the blasting is occurring above the 22 grade of where the pipe is buried -- 23 A. You'd still need to put it in. 24 Q. Well, I guess this is where I'm mystified, 25 because if I'm blasting at 100 feet above that pipe,</p>	<p>1 establish acceptable vibration levels. 2 A. On ductile iron. 3 Q. On ductile iron? 4 A. Yes. 5 Q. So you contacted the chief research engineer 6 of the Ductile Iron Association, correct? 7 A. Yes. In Atlanta. I just forget his name, 8 but I've got it written down in the file and the 9 phone number and the day and all that. 10 Q. All right. And my understanding of your 11 testimony this morning -- and this -- I don't want to 12 misunderstand this testimony. Okay? That's why I'm 13 asking you. 14 A. Yes, sir. 15 Q. I really don't care whether any of them 16 understand it. All right? 17 A. All right. 18 Q. When you talked to that chief research 19 engineer and he informed you that there was no 20 vibration level established for ductile iron by the 21 Association, from that you determined that the 22 vibration, the PPV, has to be zero? From exterior. 23 I'm not talking about -- 24 A. Yes. 25 Q. I'm not talking about what is flowing</p>

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<p>1 through the pressurized ductile iron.</p> <p>2 A. Right.</p> <p>3 Q. But exterior, it has to be zero?</p> <p>4 A. Yes, sir. And that's above -- but that</p> <p>5 again has to be -- see, it's been operating and</p> <p>6 sitting there, and it's doing its design criteria</p> <p>7 that is this number that they don't produce, because</p> <p>8 it's a guaranteed --</p> <p>9 Q. That -- Mr. Dressler, that is where I am</p> <p>10 totally lost. If they don't know, if the Association</p> <p>11 has not established the standard, I am totally lost</p> <p>12 concerning the ductile iron. Now, the PVC -- you're</p> <p>13 not saying the PVC laying in that ground was designed</p> <p>14 with zero tolerance for external PPV, right?</p> <p>15 A. What's above the limit for the PVC pipe</p> <p>16 that's there and the zero tolerance is above that.</p> <p>17 What I was trying to say is no more vibration levels</p> <p>18 above what this pipe and how it was designed and how</p> <p>19 it was bedded is meant to do.</p> <p>20 Q. So if I have evidence in my record of tests</p> <p>21 done by the U.S. Government on PVC pipe which shows a</p> <p>22 level of PPV at a distance closer than the Magruder</p> <p>23 site and the PPV on that pressurized pipe was greater</p> <p>24 than what will be generated within 150 feet, then</p> <p>25 that is meeting zero tolerance because it's not</p>	<p>1 Magruder property?</p> <p>2 MR. DRESSLER: I don't think so.</p> <p>3 What's installed on the Magruder property is Schedule</p> <p>4 40, which is common, and the PVC pipe that was --</p> <p>5 I've seen one similar to that that sustained an</p> <p>6 earthquake, a PVC, but it was probably a higher</p> <p>7 pressure thickness and what all. And so yes, I'm</p> <p>8 familiar with that study, but it was -- it was</p> <p>9 plastic, but I don't -- I think it was a higher grade</p> <p>10 plastic than what we've got here.</p> <p>11 HEARING OFFICER: Well, I'm not sure</p> <p>12 that comports with what my record is going to show.</p> <p>13 I'll find out when I read the transcript. Because</p> <p>14 the testimony, as I recall, addressed that point.</p> <p>15 And I'm going to leave it to my record. If the</p> <p>16 record says otherwise, fine.</p> <p>17 MR. MAUER: Well, that's why we put</p> <p>18 the report into evidence. I mean, the report will</p> <p>19 show you what kind of -- it's SRD 26. That's what</p> <p>20 the report will show.</p> <p>21 MR. DRESSLER: And that's higher</p> <p>22 strength than standard Schedule 40.</p> <p>23 MR. MAUER: I'm sorry to interrupt.</p> <p>24 I just thought that might help.</p> <p>25 HEARING OFFICER: That's all right.</p>
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<p>1 greater than what has been established? Is that what</p> <p>2 I'm understanding?</p> <p>3 A. Well, yes. That would be correct.</p> <p>4 Q. All right.</p> <p>5 A. And the manufacturer of PVC pipe has the</p> <p>6 maximum levels of the design as it's intended and has</p> <p>7 the bedding, because the bedding is the big important</p> <p>8 thing and how the pipe is supported and held.</p> <p>9 Q. All right.</p> <p>10 A. But --</p> <p>11 Q. But what I'm getting at is -- because I've</p> <p>12 got evidence in my record which is uncontroverted</p> <p>13 that PVC pipe like what's buried down there</p> <p>14 pressurized can withstand a greater PPV than what is</p> <p>15 going to be generated based upon the math from</p> <p>16 150-foot shots.</p> <p>17 MR. MAUER: Mr. Tichenor, could I</p> <p>18 entertain just one question that I think will clear</p> <p>19 this up?</p> <p>20 HEARING OFFICER: All right.</p> <p>21 MR. MAUER: Mr. Dressler, the</p> <p>22 information that's in the record that I believe the</p> <p>23 Hearing Officer is referring to is the PVC pipe that</p> <p>24 was tested in RI 9523. Is that the same kind of PVC</p> <p>25 and grade of PVC that's actually installed on the</p>	<p>1 Q. (By Hearing Officer) All right. So I want</p> <p>2 to go back to the ductile iron.</p> <p>3 A. And it bothers me a lot, too, that they</p> <p>4 don't have this. It's just almost unbelievable that</p> <p>5 this can't be had. And we went into in-depth</p> <p>6 research records and spun out all kinds of other</p> <p>7 information that they wouldn't have that.</p> <p>8 Q. Well, Mr. Dressler, this is where I am</p> <p>9 totally stymied, because you're telling me that</p> <p>10 there's a zero tolerance on that ductile iron pipe</p> <p>11 that's going across the Magruder property, which</p> <p>12 means that there's some vibration level above which</p> <p>13 if you get above that, that's zero tolerance. It's</p> <p>14 not that there's no vibration level, but your</p> <p>15 testimony leaves me that we have no way of knowing.</p> <p>16 A. Well --</p> <p>17 Q. And so that -- from that, I'm concluding</p> <p>18 that you're saying it can't have any vibration other</p> <p>19 than what that raw sewage is going through it.</p> <p>20 A. Well, there's a lot of vibrations that go on</p> <p>21 besides just the sewage going through it. And it is</p> <p>22 correct, we don't know what the level is of what's</p> <p>23 there now, and that's because the manufacturer</p> <p>24 doesn't have that information that you can get, or</p> <p>25 there hasn't been any tests done to support it.</p>

1 Because it's okay now, it's been functioning, and so
2 therefore it must be all right. And any other
3 vibration level above it is going to be a risk.

4 Q. Any vibration above what level? That's
5 where I'm lost.

6 A. Where it is now.

7 Q. Well, if we'd put a seismograph on that pipe
8 right now, the only vibration level is going to be
9 from what's being caused by the sewage flowing
10 through it, isn't it?

11 A. Should be. And that's probably going to be
12 zero.

13 Q. So if I go out there and dig down to that
14 ductile iron pipe with my 5-pound ball-peen harm and
15 go, bang, I've created a PPV, haven't I?

16 A. You bet.

17 Q. And that thing is going to rupture on me?

18 A. It may. Ductile iron is a fairly brittle
19 material which is not the same as high-strength
20 steel. And so I wouldn't do it. You can if you
21 want, but I wouldn't.

22 Q. You wouldn't go with a ball-peen hammer on
23 that --

24 A. No, I wouldn't.

25 Q. So I assume that if this needs to be

1 repaired in any way, you wouldn't drive a backhoe
2 across it either because it's going to create
3 vibration?

4 A. Well, it creates vibration and extra load on
5 the pipe, yes, sir.

6 Q. So any excavation --

7 A. It has to be done carefully, and it's called
8 by hand on the ductile iron pipe. Equipment --

9 Q. Mr. Dressler, my understanding of the
10 physics of this -- and I'm no expert in physics, but
11 I've got a pretty good grasp because I've studied up
12 to try to -- to be able to address this. If I go out
13 there with my long handled round nose shovel and I
14 start digging above that ductile iron, I'm going to
15 create PPV.

16 A. You may. It's going to be so small --

17 Q. Mr. Dressler.

18 A. Yes, yes, you would.

19 Q. You are saying as an expert I may, and
20 you're saying my digging in that ground is not going
21 to cause a vibration?

22 A. No, sir. I'm not trying to tell you that at
23 all. It will be -- I thought I said it would be
24 some, but it's very small.

25 Q. I understand. But I'm still back to it's

1 got to be zero.

2 A. Okay.

3 HEARING OFFICER: All right. Any
4 redirect on what I've covered, Mr. Mauer?

5 MR. MAUER: No, sir.

6 HEARING OFFICER: Mr. McGovern?

7 MR. MCGOVERN: No.

8 HEARING OFFICER: Mr. Brownlee?

9 MR. BROWNLEE: Yeah. And I do this
10 because of the questions you asked about this sheer
11 plane and pre-split.

12 EXAMINATION

13 QUESTIONS BY MR. BROWNLEE:

14 Q. It's my understanding that you said if there
15 was an eighth-inch gap or quarter-inch gap cut along
16 there that would stop all vibrations. Is that a fair
17 statement?

18 A. Established. Usually it's through the use
19 of explosives.

20 Q. But isn't the blasting technique called a
21 pre-split that we're talking about where you drill a
22 whole bunch of holes and then you load just every few
23 of them --

24 A. No.

25 Q. -- and then when it blows off, it creates a

1 real clean face?

2 A. Yes, but every hole is initiated. And it's
3 low explosives, just enough to crack between --
4 usually it's a 2-foot spacing.

5 Q. Okay. Yeah.

6 A. And that's enough to establish the crack.

7 Q. It's like those cuts at Branson going in,
8 those big clean faces?

9 A. Yes.

10 Q. That's what's done with pre-split blasting,
11 correct?

12 A. Yes. Yes, it is. There you go.

13 Q. I think that's what you're really talking
14 about here. You're not able to saw a quarter-inch
15 gap?

16 A. No.

17 HEARING OFFICER: No. You split open
18 an eighth of an inch.

19 MR. BROWNLEE: That's all I have.

20 MR. DRESSLER: And if you want it a
21 little thicker than an eighth of an inch, you can put
22 them at 1-foot centers instead of 2.

23 HEARING OFFICER: Anything else,
24 Mr. Duggan? I didn't ask you now that Mr. Brownlee
25 has --

1 MR. DRESSLER: He's thinking.

2 HEARING OFFICER: That's dangerous.
3 Proceed, Mr. Duggan, if you have questions.

4 EXAMINATION

5 QUESTIONS BY MR. DUGGAN:

6 Q. How deep would these sheer split faces have
7 to be?

8 A. Probably 50 foot.

9 Q. And to create them, would vibration be
10 created?

11 A. Yes, sir, a small amount.

12 Q. But it could be done without damaging the
13 pipes?

14 A. I think so, yes, sir. Pre-split doesn't put
15 out a whole ton of vibration like a larger explosive
16 load for a quarry blast.

17 Q. Now, if we put -- I understand there are
18 seismographs on that ductile iron pipe along the
19 bridge.

20 A. It's been reported, but I don't know about
21 it or anything about it. Vibra-Tech allegedly put
22 them up, and so I guess they are.

23 Q. Well, you'll be involved in this highway
24 expansion project, right?

25 A. Yes, sir.

1 Q. And will you be --

2 A. We are.

3 Q. And will you be putting seismographs on that
4 pipe?

5 A. Yes, sir.

6 Q. So you will be able to determine to a
7 certain extent how much vibration that pipe can
8 withstand; isn't that right?

9 A. I'm not just kidding, yes, sir.

10 Q. And if it doesn't break, that's at least how
11 much it can withstand; is that right?

12 A. Yes, sir. You've got it.

13 Q. And you probably don't want to test it to
14 its maximum strength, but you'll know --

15 A. Yes.

16 Q. -- a level of vibration that pipe can
17 tolerate; is that not right?

18 A. Yes. And the problem isn't going to come
19 from the pipe on the bridge; it's going to come from
20 the pipe that's on the heavy-duty rock cuts onto the
21 left-hand side.

22 Q. But that number will be above zero,
23 presumably; isn't that right?

24 A. That hasn't been planned as yet.

25 Q. I'm just saying, it will give us data, won't

1 it?

2 A. Yes, it will give us data.

3 MR. DUGGAN: No further questions.

4 HEARING OFFICER: Any questions on
5 the points just covered by Mr. Duggan?

6 MR. MAUER: No, your Honor.

7 HEARING OFFICER: All right. Then
8 that concludes the testimony of this witness. Again,
9 Mr. Dressler, thank you very much. You are excused.

10 MR. DRESSLER: Thank you. Shall I
11 clean up this mess and throw it away?

12 HEARING OFFICER: I tell you, in the
13 interest of time, push it to one side. Mr. Brownlee,
14 do you have rebuttal testimony?

15 MR. BROWNLEE: Yeah. We'd like to
16 call Mr. Gary Pruitt who is the owner of Pruitt Point
17 to testify regarding the construction traffic that
18 has currently been crossing the ductile pipeline.
19 This witness testified that if you had heavy traffic
20 crossing, it would cause a rupture. That's the
21 limited purpose.

22 HEARING OFFICER: All right. That's
23 the limited purpose. Mr. McGovern?

24 MR. MCGOVERN: This witness didn't
25 testify traffic would cause a rupture. He doesn't

1 know anything about this line. He hasn't done any
2 experiments on it, no investigation if we're talking
3 about the Grand Glaize Bridge. This is not rebuttal;
4 this is new evidence. This is new evidence of which
5 this witness was never disclosed, and I don't know if
6 he's simply testifying to fact or providing any
7 expert opinion in the process. I'm simply objecting
8 at this point it's not rebuttal, not disclosed, and
9 he's going to be providing opinions.

10 MR. BROWNLEE: This is traffic in a
11 completely different location where they're blasting,
12 supplying rock to the Pruitt Point. It doesn't have
13 anything to do with this bridge.

14 MR. MCGOVERN: Then it is irrelevant
15 if it has nothing to do with this site either.

16 MR. MAUER: And it was certainly
17 nothing that Mr. Dressler testified to. He testified
18 to nothing about Pruitt's Point or --

19 HEARING OFFICER: Well, we're not
20 talking about Pruitt's Point. It's not the location.
21 You're talking about you wish to present testimony of
22 truck traffic over the ductile iron forced main?

23 MR. BROWNLEE: At a location
24 indicated on their exhibit which I tried to ask
25 Mr. King about, and he, of course, didn't recognize

1 what that was. Mr. Pruitt is the owner of this and
2 would be able to testify that that traffic occurred
3 over the lines directly off a haul road out of a
4 blasting site that's currently existing there after
5 these lines were installed.

6 MR. MCGOVERN: If the witness
7 testified he doesn't know about it, then this isn't
8 rebuttal testimony. This is additional testimony to
9 try to supplement the record.

10 HEARING OFFICER: You're talking
11 about Mr. Dressler's testimony?

12 MR. MCGOVERN: No. No. No.

13 MR. MAUER: He's talking about
14 Mr. King.

15 MR. MCGOVERN: Mr. Brownlee just
16 mentioned Mr. King's testimony. He said, when asked,
17 Mr. King said, I don't know. Now he's going to call
18 Mr. Pruitt --

19 HEARING OFFICER: I thought you were
20 talking about Mr. Dressler's testimony relative to
21 trucks going over the pipes.

22 MR. BROWNLEE: I am.

23 MR. MAUER: Your Honor, there is no
24 information that the line that Mr. Pruitt would
25 testify to is buried to the same depth, has any of

1 the same factors, was driven over it at 3 feet. And
2 Mr. Pruitt -- this is certainly nothing new that
3 Mr. Dressler just disclosed. His wheel load
4 calculation was in his original report. Mr. Pruitt
5 has never been disposed. We've never had the
6 opportunity to depose him. This is not rebuttal.

7 HEARING OFFICER: Mr. Brownlee, we're
8 faced with the same situation with this pipeline that
9 we've had from day one. We've got good engineering
10 reports, and basically everybody that's testified to
11 it has basically said, oh, we don't know. And so I
12 don't see how this witness is going to rebut when
13 Mr. King said, I don't know.

14 MR. BROWNLEE: Well, Mr. King didn't
15 recognize when I put the blue "X" if there was
16 blasting that occurred there or there had been
17 driving. I checked his deposition, and that's what
18 he said, I don't know. This witness testified that
19 if you drove construction traffic over those lines,
20 they would rupture. And that's my limited purpose,
21 to show they've been driving over those lines out of
22 a blasted area hauling rock over the lines and they
23 haven't ruptured.

24 MR. MAUER: Your Honor, he testified
25 that if he drove over the lines, he was talking about

1 the construction quarry traffic over top of the lines
2 on the Magruder property as they exist on the
3 Magruder property.

4 HEARING OFFICER: That's what I
5 understand, and I'm not -- I'm back to because of
6 what I personally consider a lousy job of as-is
7 engineering on this line, we don't know that where
8 they've been driving this is the same depth as the
9 Magruder lines. Yeah, they may be. Yeah, the
10 contractor may have done it as he apparently
11 purported that he did, but I don't have a foundation
12 to establish that the depth is the same as what's on
13 the Magruder property.

14 MR. BROWNLEE: Well, we would assume
15 it's all at the same depth. There's nobody that's
16 testified to the exact depth.

17 HEARING OFFICER: I understand, Mr.
18 Brownlee. It is not in the nature of what I consider
19 rebuttal, and I don't have the foundation. If I had
20 that foundation, then it would be a -- as far as the
21 Dressler testimony, if I had the foundation to
22 establish that it's very similar, but I don't.

23 MR. BROWNLEE: Then we make the offer
24 on the issue of zero tolerance that these trucks have
25 been driving over these lines.

1 MR. MCGOVERN: In response --

2 HEARING OFFICER: Mr. McGovern?

3 MR. MCGOVERN: I'm going to object
4 again. One, he's not disclosed. This has been an
5 issue in the case from the beginning. The only thing
6 he can do to refute that is provide expert testimony,
7 of which he was not disclosed as an expert. And,
8 again, it is irrelevant to his testimony if he is a
9 lay person of his experience in an area which has no
10 relation whatsoever to the area in which these pipes
11 are located. There is no foundation to suggest the
12 circumstances in that area and the conditions are the
13 same. It is new testimony. It is not rebuttal.

14 MR. BROWNLEE: If I could respond.
15 He's not testifying as an expert. He's testifying as
16 a fact witness, as a person who owns the property
17 where they've been blasting and hauling thousands of
18 tons of rock out to the Pruitt Point which we've
19 talked about, and he can testify factually as to
20 what's gone on since that pipeline has been in the
21 ground. Admittedly, Mr. King testified when I asked
22 him do you know what these areas are, do you know
23 blasting, he said, I don't know.

24 MR. MCGOVERN: Again, if he said, I
25 don't know, then this isn't rebuttal.

1 HEARING OFFICER: I understood we're
2 talking about Dressler saying you can't drive over
3 the lines.

4 MR. MAUER: And, your Honor, I mean,
5 he still was never disclosed. He was never a witness
6 identified. He's not on the witness list, which was
7 the whole purpose of your pre-trial orders.

8 MR. BROWNLEE: He just testified half
9 an hour ago. How could we possibly disclose it?

10 HEARING OFFICER: I didn't order that
11 rebuttal witnesses had to be on the list.
12 Mr. Dressler's testimony has come today.

13 MR. MCGOVERN: It is the same
14 problem. He's going to testify to a line he can't
15 see. We don't know the depth. I agree with you as
16 to these --

17 HEARING OFFICER: Mr. McGovern,
18 you're right, except Mr. Dressler didn't know either,
19 and Mr. Dressler said you can't drive over the line
20 and he doesn't know the depth.

21 MR. MCGOVERN: Mr. Dressler's
22 testimony went to load calculations that he had
23 prepared based on formulas contained within his
24 report. This witness is simply going to come in and
25 say, I have lines on my property, there are trucks

1 that drive near them and they haven't ruptured yet.
2 Again, it is not a rebuttal of Mr. Dressler's
3 testimony which was based upon reasonable engineering
4 conclusions based upon formulas that he utilized
5 within his report. That's not what this individual
6 is going to say. He's not going to refute that
7 testimony or refute that formula. And if he is --

8 HEARING OFFICER: Are you
9 representing that those -- I'm still having this
10 monumental problem getting around no vibrations, zero
11 tolerance. And my understanding of the Dressler
12 testimony, notwithstanding he did load calculations,
13 was you can't have any vibration. I mean, that's
14 what my last line of questioning related to.

15 MR. MCGOVERN: Well, in all fairness,
16 I think what he responded to is yes, there might be
17 some out there, but we don't know the baseline simply
18 because the industry does not. Now, his concern is
19 if it increased, he can't sit here and testify to a
20 reasonable degree of engineering certainty that
21 nothing will happen. If this witness is going to --

22 HEARING OFFICER: And, quite frankly,
23 Mr. McGovern, that leads me right back, how could he
24 testify as to the loaded trucks going over them when
25 he doesn't know that? I'm mystified at the

1 calculation.

2 MR. MCGOVERN: It's a different
3 calculation. He is talking about loads. He is
4 talking about the actual weight and pressure on the
5 top of that pipe is the calculation he did on the
6 load.

7 HEARING OFFICER: But he doesn't know
8 what the standard of the industry is for that ductile
9 iron pipe as installed, does he?

10 MR. MCGOVERN: No. He's talking
11 about -- that's vibrations, and I agree with that.
12 What he testified to about the load calculation is
13 the actual weight of those vehicles going over the
14 top of the ductile pipe, that there would be a
15 rupture or failure, a collapse of the pipe itself.
16 Completely different calculation and analysis than
17 the vibration. This witness, I assume, is going to
18 come in and try to refute those load calculations by
19 providing lay testimony that what he has physically
20 observed somehow refutes that, and I don't think
21 that's a rebuttal.

22 MR. BROWNLEE: It's a fact statement
23 from a person that observed construction trucks,
24 which is Mr. Dressler's testimony, driving over these
25 actual lines. That's what it amounts to. He's not

1 an expert witness. That's it. He's testified that
2 if you drive over those lines, they're going to
3 rupture, A. And, B, if you drive over the lines,
4 it's going to create vibrations that's going to cause
5 it to rupture.

6 MR. MCGOVERN: I'll take exactly what
7 Mr. Brownlee just said. He's a new witness providing
8 new information on an issue which has been readily in
9 this case from the inception. He is not providing
10 rebuttal testimony to Mr. Dressler. What Mr.
11 Brownlee just said is he's going to testify to facts
12 based upon things he has seen. Mr. Dressler
13 testified to an engineering degree -- a reasonable
14 degree of engineering certainty as to load
15 calculations he performed, and based on those
16 calculations in his opinion as an engineer, he felt
17 that the lines would fail, collapse, if, in fact, the
18 vehicles go over the top.

19 HEARING OFFICER: I'm going to
20 sustain the objection. I'm just not -- I'm not
21 comfortable with the original direct testimony and
22 I'm not going to be any more comfortable with
23 rebuttal testimony that says trucks have been driving
24 over the lines. Anything further as far as rebuttal,
25 Mr. Brownlee?

1 MR. BROWNLEE: (Shakes head.)
 2 HEARING OFFICER: Any rebuttal,
 3 Mr. Duggan?
 4 MR. DUGGAN: I'm kind of in a bit of
 5 a quandary, and I'll just ask for some sort of a
 6 ruling from you on this.
 7 HEARING OFFICER: All right.
 8 MR. DUGGAN: My client, the
 9 Department, has asked that I present Mr. Coen again
 10 on the stand. He wouldn't be so much a rebuttal
 11 witness as a -- it would be more supplemental of his
 12 testimony, and it would be along the lines of making
 13 a sort of refinement of his recommendation. His
 14 initial recommendation is simply grant the permit.
 15 The refinement would be along the lines of if the
 16 Commission chooses to believe the Applicant's
 17 experts -- and he will not make any recommendation
 18 about what to believe or not to believe, but if the
 19 Commission were to choose to believe the Applicant's
 20 expert witnesses, he would propose certain conditions
 21 be placed in the permit consistent with that
 22 testimony, with the understanding that if the
 23 Commission chooses to believe that no permit should
 24 be issued at all, that that is, of course, their
 25 call.

1 We could probably present that in a brief
 2 as well rather than put him on the witness stand, but
 3 I just need a ruling as to whether the Hearing
 4 Officer will even entertain that kind of information.
 5 MR. BROWNLEE: I would object to
 6 that. And we intend to, for that matter, supply
 7 those same kind of conditions that would be agreeable
 8 in a brief, and I think that would be appropriate.
 9 Otherwise we could be here for another two hours on
 10 his ideas.
 11 HEARING OFFICER: Mr. Mauer, do you
 12 wish to weigh in on this?
 13 MR. MAUER: I'll defer to Mr.
 14 McGovern first.
 15 HEARING OFFICER: Mr. McGovern
 16 objects?
 17 MR. MCGOVERN: As to any testimony in
 18 which Mr. Coen now, after the fact, is going to
 19 impose conditions well beyond the scope of 444.773.
 20 Under the statutes, it is certainly within his
 21 province to grant or deny. At this point to put
 22 conditions on, I think, is inappropriate.
 23 HEARING OFFICER: Mr. Mauer?
 24 MR. MAUER: I certainly would also
 25 join and would only also put on the record that when

1 the motion to dismiss was argued for the
 2 supplementation of the application, I believe the
 3 Department's position was at that point that this
 4 Hearing Officer was confined to what the Hearing
 5 Officer was asked to review when the hearing started
 6 and that the scope of the Hearing Officer's authority
 7 was review what you have and make your
 8 recommendation. And I believe that was Mr. Duggan's
 9 position. I realize he hasn't formulated his brief
 10 yet, but I was very noted of that position. I
 11 believe that to be consistent. The Department would
 12 also have to ask this Hearing Officer to review what
 13 was presented, not a bunch of piled on conditions but
 14 present yes or no based upon what was presented.
 15 HEARING OFFICER: Mr. Duggan, I have
 16 given consideration to your request, and
 17 notwithstanding all three of the -- your brothers of
 18 the Bar in agreement, my decision is based simply
 19 upon this -- the way I understand the process and
 20 what I believe I'm bound by.
 21 MR. BROWNLEE: Your Honor, if I
 22 could, the statute does allow the Department to
 23 provide special conditions on permits, though.
 24 HEARING OFFICER: The Hearing Officer
 25 in making his proposed order and recommendation to

1 the Commission will be more than happy to take into
 2 consideration proposed findings of fact and
 3 conclusions of law by all Counsel, and we're going to
 4 talk about that momentarily as far as a time schedule
 5 on that. Essentially, what you purport in your offer
 6 of proof of testimony of Mr. Coen, and
 7 notwithstanding that this may not set well with the
 8 Department Director, so I may never have the
 9 privilege of doing one of these again, I'm not going
 10 to allow it because I have the responsibility and I
 11 will make that recommendation to the Commission, and
 12 if the Commission, which I think would have the
 13 prerogative, but it's up to their determination, to
 14 inquire of the Program Director and say, well, based
 15 upon all of this, if they wish to have Mr. Coen's
 16 input at that point, that's fine. I do not believe
 17 that I as Hearing Officer can take it and give it any
 18 credence or weight whatsoever. I think I have been
 19 charged with the responsibility, and I have to make
 20 my decision and order to the Commission, and then
 21 they can go with it wherever they will. And I think
 22 they then can certainly rely upon their staff, but,
 23 again, that's more a determination for you as counsel
 24 through the Commission and the Commission to
 25 determine. So I will not hear, as you purported,

1 what would be the testimony of Mr. Coen.

2 MR. DUGGAN: I appreciate the ruling.

3 Thank you.

4 HEARING OFFICER: All right. Let me
5 take care of a couple of what I've got as
6 housekeeping. Mr. Brownlee, I need for my record a
7 clean Exhibit 10 of the Henderson report that is
8 numbered.

9 MR. BROWNLEE: Right.

10 HEARING OFFICER: Get that to me as
11 well as opposing counsel as soon as possible. A
12 drawing of the easement was located at the
13 Engineering Department. Was that provided to --
14 John, was that provided to the other attorneys?

15 MR. POLHEMUS: No. I'll do that
16 tonight.

17 HEARING OFFICER: All right. It is
18 in PDF format. It is two pages. I've got to say,
19 I'm terribly surprised, because apparently in the
20 Recorder of Deeds of Miller County, when the easement
21 was recorded there is a drawing, but it's not the
22 type survey that, quite frankly, I would have wanted
23 my client to have recorded if I had been handling it.
24 But I am -- I want to give you all due notice, I am
25 accepting that into the record as part of the Board's

1 exhibits which are grouped in the title work and does
2 have the description, as well as the description has
3 been also provided. It was sent to me. Was it sent
4 to --

5 MR. POLHEMUS: That's the same
6 description, I think, that's in the title work.

7 HEARING OFFICER: I think it is. It
8 is cleaner, though, so make sure that with the
9 drawing a copy of that description is provided. I
10 have it on my computer.

11 If you will, I want to go over as far as
12 the exhibits that have been received. I'll start
13 with the Joint Board, Mr. Mauer. I have -- everybody
14 got their list? I have BP-1, BP-2, 3, 6, 7, 8, 16,
15 18, 22, 23, 24, 25 and 26, it appears. Then I've got
16 35, BP-51 and 52, BP-53, 54 and 55. All right?
17 Those are correct?

18 MR. MAUER: Yes, your Honor.

19 HEARING OFFICER: Thank you,
20 Mr. Mauer. Mr. McGovern, I am showing Individual
21 Petitioners' Exhibits MP-1, 2, 3 and then Exhibits 15
22 through 34 subject to an objection as to those items
23 which would pre-date 2002, beyond the five-year
24 period of non-compliance and also which ones came
25 within health, safety, livelihood regulated by DNR.

1 I take those subject to a ruling on that objection
2 raised by Mr. Brownlee, and I'll simply rule on it in
3 the decision, as you recall. And I think at the
4 time, Mr. McGovern, you indicated, of course, if it's
5 prior to the five-year, that's no problem. So those
6 are in, subject to my ruling.

7 MR. MCGOVERN: Did you say MP-6 as
8 well?

9 HEARING OFFICER: I did not say MP-6.
10 It was referenced. It's the same as Applicant's 6.

11 MR. MCGOVERN: I think that's what we
12 did.

13 HEARING OFFICER: And I think that's
14 the way we handled it.

15 MR. MCGOVERN: And I think I had
16 MP-35 and we did the same thing, because it was a
17 part of the application.

18 HEARING OFFICER: Is it part of the
19 Applicant's?

20 MR. MCGOVERN: It was the Staff
21 Direct's recommendation.

22 HEARING OFFICER: Staff Director's
23 recommendation, which is...

24 MR. MCGOVERN: I have it as offered
25 and admitted, but we may have --

1 HEARING OFFICER: No. Let's go
2 ahead -- MP-35 is admitted. I think that was in
3 Mr. McDonald's testimony. No. It may have been one
4 of the others. But I'm going to take 35 in because
5 I'm not noticing exactly where we are otherwise on
6 Applicant's.

7 All right. As far as Applicant's,
8 Mr. Troutwine, are you following me here?

9 MR. TROUTWINE: Yes.

10 HEARING OFFICER: All right. I'm
11 showing Applicant's 2, 3, 4, 5, 6, 7, 8, 9 and 10
12 have been received, 18, 19, 20, 21, 22, 25, 26, 28,
13 29, 30, 31.

14 MR. TROUTWINE: That's correct.

15 HEARING OFFICER: All right. Let me
16 look just a moment. Did any of those include the
17 State blasting law? And I'm not talking about the
18 bill. I'm talking about the law.

19 MR. MAUER: I'm not sure, your
20 Honor...

21 HEARING OFFICER: Yes, Mr. Mauer?

22 MR. MAUER: Did you note that
23 Applicant's 10 was limited to the first 25 pages?

24 HEARING OFFICER: Yes. What we're to
25 get is the first 25 pages.

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<p>1 MR. MAUER: 35 pages. My apologies. 2 MR. BROWNLEE: You mean that's on 3 Henderson's exhibit? 4 HEARING OFFICER: Yeah. Henderson 5 through Page 35, correct. I thought somebody had an 6 exhibit of the blasting law. Yeah. Here we go. 7 Henderson testified to it. BP-43. Any objection to 8 it being received? Otherwise, the Hearing Officer is 9 going to take official notice anyway. All right. 10 BP-43, and I think that concludes... 11 I remind Applicant and Respondent, you 12 have until June 13th, as long as your brief and 13 response to the motion to dismiss and add petitioners 14 is postmarked by that date. If you e-mail it to me 15 by that date as an attachment, that's fine. Filing 16 of proposed findings of fact and conclusions of law, 17 I hope you all have been working on it. Well, I 18 actually would like to see it about the end of June, 19 June 30th. I realize I don't have access to your 20 all's documents, and I'm sure you all have a lot of 21 other items to take care of. I do, too. 22 MR. MAUER: I don't know why that 23 would be a problem for us, your Honor. I was just 24 going to ask our court reporter, you've been very 25 diligent in turning them around. Any idea when we'll</p>	<p>1 have a week? I don't know that we'll have anything 2 to say, but until we see it, I can't guarantee. 3 HEARING OFFICER: All right. I 4 really wouldn't entertain a reply, but I know that 5 that's standard. Yeah, you can -- you'll have until 6 the 20th to reply. 7 MR. MAUER: Thank you. 8 HEARING OFFICER: Let me make a note 9 of that, and I'll include that in my order. I think 10 I can make heads and tails of all these Post-Its. 11 Anything further, Gentlemen? 12 MR. MCGOVERN: No. 13 MR. MAUER: Nothing. 14 HEARING OFFICER: I do want to thank 15 all of you. My understanding is that nothing quite 16 like this the Commission has had to deal with before, 17 and I do appreciate the good work all Counsel has 18 done on this. And rest assured that I'm going to be 19 as diligent as possible in going over a great deal of 20 information and providing to the Commission as 21 well-reasoned an order, proposed order, as I can. 22 I want to assure all parties that I am 23 very mindful of the concerns that we have. It's not 24 the complication of the case, but it is the situation 25 which we're dealing with, and I am -- I have been</p>
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<p>1 get the transcript for the last two days? 2 HEARING OFFICER: The transcripts 3 from Wednesday and today would probably be somewhere 4 along that week of the 16th, in there somewhere. 5 MR. MAUER: That should be fine, your 6 Honor. Thank you. 7 HEARING OFFICER: All right. I will 8 issue an order setting that out that proposed 9 findings of fact and conclusions are due on 10 June 30th. And on that, I would request -- I would 11 request that it be sent to me in a Word format as an 12 electronic attachment that I can access so that if I 13 wish to lift some of your good scholarly legal work 14 and cut and paste that I don't have to take your hard 15 copy and use it and retype it. I do want you to 16 provide me a hard copy on your briefs as well as 17 proposed findings, proposed orders, because I have to 18 turn over a complete record of this to DNR, and so I 19 want hard copy on that, but you can transmit all of 20 those to me in electronic format would be fine. 21 Is there anything further that we need to 22 take up before we close this? 23 MR. MAUER: Did you want to set a 24 date for when you want any reply should one be coming 25 on the briefs that are being filed on 6/13? Can we</p>	<p>1 from the outset, from when I was contacted and asked 2 to take the case, that this -- there are serious 3 concerns that have to be addressed. So, again, I 4 thank each one of you and your offices for the fine 5 work that you've done. With that, the hearing is 6 concluded. We're off the record and adjourned. 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p>

CERTIFICATE OF REPORTER

I, Judy K. Moore, Certified Court Reporter
within and for the State of Missouri, do hereby
certify that the meeting aforementioned was held at
the time and in the place previously described.

IN WITNESS WHEREOF, I have hereunto set my
hand and seal.

JUDY K. MOORE, CSR #1121
Certified Court Reporter
within and for the
State of Missouri